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December 3, 2021

**VIA ELECTRONIC FILING**
The Honorable Jocelyn G. Boyd
Chief Clerk/Executive Director
Public Service Commission of South Carolina
101 Executive Center Drive, Suite 100
Columbia, SC 29210

**Re: Applications of Duke Energy Progress, LLC and Duke Energy Carolinas, LLC for Approval of Smart $aver Solar as Energy Efficiency Program**
**Docket Numbers: 2021-143-E & 2021-144-E**

**Joint Proposed Order**

Dear Ms. Boyd:

Please find enclosed for filing in the above-referenced docket the Joint Proposed Order of Duke Energy Carolinas, LLC, Duke Energy Progress, LLC, Southern Alliance for Clean Energy, the South Carolina Coastal Conservation League, Upstate Forever, North Carolina Sustainable Energy Association, Vote Solar, and Solar Energy Industries Association.

The Joint Proposed Order supports the following findings by the Commission:

1) The Program is consistent with and should be evaluated as an energy efficiency / demand-side management ("EE/DSM") program under S.C. Code Ann. § 58-37-20;

2) The Program fits squarely under the S.C. Code Ann. § 58-37-20 and is consistent with previous analogous EE/DSM offerings;

3) Given that rooftop solar achieves South Carolina's requirements for EE/DSM programs, it can serve as an EE/DSM measure as proposed in these proceedings; and

4) The Program fulfills both the applicable qualitative requirements under the EE/DSM Mechanism and the applicable quantitative requirements under the EE/DSM Mechanism.

By copy of this letter, the same is being served on the parties of record.

Kind regards,

Sam Wellborn

Enclosure

cc: Parties of record (via email)
David Butler, Chief Hearing Officer (via email)

**BEFORE**

**THE PUBLIC SERVICE COMMISSION**

**OF SOUTH CAROLINA**

**DOCKET NOS. 2021-143-E & 2021-144-E - ORDER NO. _____**

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| In the Matter of: | ) | |
| | ) | |
| Application of Duke Energy Progress, LLC for Approval of Smart $aver Solar as Energy Efficiency Program | ) | **JOINT PROPOSED ORDER** |
| | ) | |
| Application of Duke Energy Carolinas, LLC for Approval of Smart $aver Solar as Energy Efficiency Program | ) | |

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## I. INTRODUCTION AND PROCEDURAL HISTORY

This matter comes before the Public Service Commission of South Carolina (the "Commission") on the Applications of Duke Energy Carolinas, LLC ("DEC") and Duke Energy Progress, LLC ("DEP" and together with DEC, the "Companies") for approval of their proposed Smart $aver Solar as Energy Efficiency Programs (collectively, the "Program"). DEP's Application was filed on April 23, 2021 in Docket No. 2021-143-E pursuant to S.C. Code Ann. § 58-37-20 and S.C. Code Ann. Regs. 103-823, and Order No. 2021-33 issued in Docket No. 2015-163-E. DEC's Application (together with DEP's Application, the "Applications") was filed in Docket No. 2021-144-E on April 23, 2021 pursuant to S.C. Code Ann. § 58-37-20 and S.C. Code Ann. Regs. 103-823, and Order No. 2021-32 issued in Docket No. 2013-298-E.

### A. Notice

On May 7, 2021, the Clerk's Office of the Commission issued a Notice of Filing (the "Notices") in each of these dockets, along with a letter instructing the Companies to publish the Notices in newspapers of general circulation and provide Proof of Publication on or before July 15, 2021. The letter also instructed the Companies to furnish the Notices to each affected customer and provide a certification to the Commission on or before July 15, 2021, that notification had been furnished.

In compliance with the Commission's instructions, the Companies published the Notices in newspapers of general circulation and, on July 15, 2021, filed affidavits demonstrating that the Notices were duly published with the Commission. The Companies also furnished a copy of the Notices to their retail customers by bill insert, or electronically for those customers who agreed to receive the Notices electronically. In accordance with the instructions from the Clerk's Office, on July 15, 2021, the Companies filed affidavits with the Commission certifying that the Notices were furnished to the Companies' affected retail customers in South Carolina.

**B. Intervention**

Timely petitions to intervene in these proceedings were filed by the Southern Alliance for Clean Energy ("SACE"), the South Carolina Coastal Conservation League ("CCL"), Upstate Forever, North Carolina Sustainable Energy Association ("NCSEA"), Vote Solar, and Solar Energy Industries Association ("SEIA"). SACE, CCL, Upstate Forever, NCSEA and Vote Solar are collectively referred to herein as the "Clean Energy Intervenors." The South Carolina Office of Regulatory Staff ("ORS") is considered a party of record pursuant to S.C. Code Ann. § 58-4-10. There was no opposition to any of the Petitions to Intervene and the Commission issued Orders granting each Petition to Intervene.[1]

**C. Procedural Schedule**

On July 27, 2021, Notices of Hearing were issued by the Clerk's Office setting separate procedural schedules, including testimony pre-filing deadlines and hearing dates, for each of the dockets. On August 13, 2021, the Companies filed a letter requesting that the Commission consolidate and amend the procedural schedules for Docket Nos. 2021-143-E and 2021-144-E and submitted a proposed procedural schedule. Letters of support for the Companies' procedural request were filed by the Clean Energy Intervenors and SEIA on August 13, 2021. The ORS filed a response to the Companies' request on August 19, 2021 supporting the Companies' request to consolidate the dockets, but opposing the Companies' proposed procedural schedule on the grounds that: 1) the proposed schedule was unreasonable and would minimize the time the ORS would have to analyze and prepare recommendations on the Program and 2) the proposed schedule would require the ORS to obtain leave from the Commission prior to filing surrebuttal testimony,

[1] *See* Order No. 2021-102-H granting the Petition to Intervene filed on behalf of SACE, CCL, Upstate Forever, and NCSEA; *See* Order No. 2021-106-H granting the Petition to Intervene filed on behalf of Vote Solar; *See* Order No. 2021-107-H granting the Petition to Intervene filed on behalf of SEIA.

which would be contrary to the interests of administrative economy and transparency. The ORS's response provided an alternative procedural schedule for Commission consideration. The Companies filed a reply to the ORS's response on August 24, 2021, noting that the ORS's pre-filed testimony deadline would be set well after the Applications were filed and that the Companies' request was not for an expedited schedule but rather a more equitable one. On September 1, 2021, the Commission issued Order No. 2021-611 consolidating Docket Nos. 2021-143-E and 2021-144-E, denying the Companies' proposal that a motion be required prior to the ORS's and intervenors' filing surrebuttal testimony in the dockets, and setting the pre-filing testimony deadlines and hearing dates for the consolidated dockets.[2]

**D. Hearing**

The public evidentiary hearing in Docket Nos. 2021-143-E and 2021-144-E lasted six days and was held on October 28, 2021, November 2, 2021, November 3, 2021, November 4, 2021, November 5, 2021, and November 9, 2021, before this Commission with the Honorable Justin T. Williams presiding as Chairman. [3] The hearing was conducted in a hybrid manner, with some parties presenting their testimony to the Commission in person and some participating virtually. Representing the parties and appearing before the Commission in these dockets were Samuel J. Wellborn, Esquire, J. Ashley Cooper, Esquire, and Marion William Middleton III, Esquire for the Companies; Kate Lee Mixson, Esquire and Emma C. Clancy, Esquire for SACE, CCL, Upstate Forever, NCSEA, and Vote Solar; Jeffrey W. Kuykendall, Esquire and Charles L.A. Terreni, Esquire for SEIA; and Andrew M. Bateman, Esquire, Alexander W. Knowles, Esquire, and Benjamin P. Mustian, Esquire for the ORS.

[2] The Commission encourages the parties to provide input on similar procedural matters in Docket No. 2021-291-A.

[3] Commissioner Ervin recused himself and did not participate in the deliberations leading to this Order.

The Companies, the ORS, and the Clean Energy Intervenors each presented witnesses regarding the Companies' proposed Programs.

**1. The Companies' Testimony**

The Companies presented the direct testimony of Timothy Duff and Lynda Powers. The pre-filed direct testimony of Witness Powers, along with the revised pre-filed direct testimony of Witness Duff, was accepted into the record without objection. The Companies' witnesses' direct exhibits were marked as Hearing Exhibit 1 and were entered into the record of the case.[4]

Witness Powers had one minor change to her pre-filed testimony on the stand to reflect a change to her last name from Shafer to Powers. Her testimony discussed how the proposed Program fits in the Companies' current suite of EE/DSM programs and how Program costs would be recovered through the annual EE/DSM rider proceedings.

The Companies tendered Witness Duff as an expert in the field of energy efficiency and demand-side management programs and measures. He was qualified as an expert in his field without objection. Witness Duff's direct testimony advocated for the appropriateness of including the Program within the Companies' suites of EE/DSM programs, described how the recently approved EE/DSM Mechanism supports the Program's inclusion, and discussed a possible low-income program proposal in the future.

After the presentation of the Clean Energy Intervenors' direct testimony and the ORS's direct and surrebuttal testimony, the Companies presented the rebuttal testimony of Timothy Duff, Leigh C. Ford, and Lon Huber. The pre-filed rebuttal testimony of Witness Duff was accepted into the record without objection.

[4] Hearing Exhibit 1 consists of Direct Testimony Exhibits 1 and 2 of the Companies' Witness Duff.

The pre-filed rebuttal testimony of Witnesses Ford and Huber was accepted into the record subject to page 7, line 21 through page 8, line 9 of Witness Huber's pre-filed rebuttal testimony being struck as a result of the ORS's motion. The Companies' witnesses' rebuttal exhibits were marked as Hearing Exhibits 13 and 14 and were entered into the record of the case. [5] The Companies tendered Witness Ford as an expert in the fields of net energy metering ("NEM"), energy efficiency ("EE"), and distributed energy resources ("DER"). After voir dire, the ORS objected to Witness Ford's qualification as an expert in the fields of DER and EE. The ORS's objection was overruled, and Witness Ford was qualified as an expert in each of the requested fields. The Companies tendered Witness Huber as an expert in the fields of rate design and South Carolina NEM. He was qualified as an expert in his field without objection.

Witness Duff's testimony rebutted the ORS's testimony regarding Mr. Horii's proposal to prioritize cost-effectiveness screens other than the Utility Cost Test ("UCT") and ORS Witness Morgan's undue and inappropriate focus on program costs rather than a balancing between customer savings and program costs. Witness Ford's testimony focused on the distinctions between NEM lost revenues, which are based on total generator output, and Net Lost Revenues ("NLR"), which reflect additional reductions in demand caused by the Program.

Witness Huber's testimony responded to certain allegations in the direct testimony of the ORS's Witnesses Horii and Morgan. Specifically, Witness Huber explained that solar can serve as an EE measure and pointed out that Witness Horii also asked the Commission to inappropriately rescind the UCT as the primary cost-effectiveness test in the EE/DSM context.

[5] Hearing Exhibit 13 consists of Rebuttal Testimony Exhibits 1 and 2 of the Companies' Witness Duff. Hearing Exhibit 14 consists of Rebuttal Testimony Exhibit 1 of the Companies' Witness Huber.

**2. Clean Energy Intervenors' Testimony**

The Clean Energy Intervenors presented the direct testimony of Eddy Moore. The pre-filed direct testimony of Witness Moore was accepted into the record without objection by the parties. The Clean Energy Intervenors tendered Witness Moore as an expert in the fields of clean energy policy and utility regulation, energy efficiency policy, and South Carolina energy policies. The ORS objected to Witness Moore being qualified as an expert in the field of South Carolina energy policies only to the extent he intended to testify as to the legislative intent of Act 62. The ORS's objection was noted, and Witness Moore was qualified as an expert in all of the requested fields with the instruction to avoid discussing the legislative intent behind Act 62.

In his direct testimony, Witness Moore generally supported the Program and explained that the "Commission's approval of the program would support improved coordination between efficiency and distributed renewable generation and between demand-side management and rate schedules, a result that is in customers' best interest." Tr. Vol. 1, p. 164.8.

After the presentation of the ORS's direct and surrebuttal testimony and the Companies' rebuttal testimony, the Clean Energy Intervenors presented the surrebuttal testimony of Witness Moore. Witness Moore's pre-filed surrebuttal testimony was accepted into the record.

In his surrebuttal testimony, Witness Moore focused primarily on the distinctions between NLR and NEM lost revenues, how the Total Resource Cost ("TRC") can produce artificially lower cost-effectiveness results because it is not balanced and makes it difficult to quantify the benefits customers are receiving, and how the ORS used different standards to evaluate the Companies' Program than it has used to evaluate all other EE/DSM programs.

**3. ORS Testimony**

The ORS presented the direct and surrebuttal testimony of O'Neil Morgan, the direct and surrebuttal testimony of Brian Horii, and the surrebuttal testimony of Robert Lawyer. The pre-filed testimony of the ORS's witnesses was accepted into the record without objection by the parties. The ORS's witnesses' direct and surrebuttal exhibits were marked as Hearing Exhibits 2, 3 and 8, and were entered into the record of the case.[6]

Witness Morgan and Witness Lawyer presented their testimony jointly in panel format. Their testimony argued that: 1) solar photovoltaic ("PV") systems are not an EE measure; 2) the incentives in the proposed Program are not necessary to encourage solar PV installation; 3) the Companies did not provide evidence that adoption rates would change once the Permanent Solar Choice Tariff becomes effective in January 2022 and the adoption of rates under the Interim Riders is substantial; 4) certain costs are not recoverable under S.C. Code Ann. §58-40-20(I); 5) while the UCT is the primary cost test, the other tests remain relevant and should be considered; and 6) the Companies' cost-effectiveness tests were flawed. The ORS tendered Witness Morgan as an expert in the field of energy efficiency and demand-side management ("DSM") program development and implementation and he was qualified as an expert in his field without objection. The ORS tendered Witness Lawyer as an expert in the field of South Carolina DER, NEM, DSM, and EE programs, program implementation, and cost recovery.

Witness Horii presented his direct and surrebuttal concurrently. His testimony focused on three key points: 1) solar PV systems are a generation resource rather than an EE resource; 2) solar PV fails the TRC test, which is the only test that considers costs to customers; and 3) solar PV also

[6] Hearing Exhibit 2 consists of Direct Testimony Exhibits OOM-1 through OOM-4 of ORS Witness Morgan. Hearing Exhibit 3 consists of Surrebuttal Testimony Exhibits OOM-1 and OOM-2 of ORS Witness Morgan. Hearing Exhibit 8 consists of Direct Testimony Exhibits BKH 1 through BKH 6 of ORS Witness Horii.

fails the UCT when a correct free-rider calculation is used.[7] The ORS tendered Witness Horii as an expert in the fields of avoided costs, utility ratemaking, and DER/DSM/EE cost-effectiveness evaluations and he was qualified as an expert in his field without objection.

## II. STANDARDS OF REVIEW AND APPLICABLE LEGAL FRAMEWORK

As discussed below, the Commission must base its evaluation of the Program upon the evidence in the record. This evaluation will be conducted under the applicable EE/DSM framework in South Carolina, which arises under S.C. Code Ann. § 58-37-20 and the corresponding EE/DSM Mechanism.

### A. Standards of Review

#### 1. Burden of Proof

The burden of proof for determining whether the Companies have shown that the Program should be approved is the preponderance of the evidence standard. As discussed below and throughout these proceedings, the Commission's evaluation of the evidence must be conducted according to and under the EE/DSM Mechanism approved for the Companies, as well as under the provisions of S.C. Code Ann. § 58-37-20. S.C. Code Ann. § 1-23-600(A)(5) ("Unless otherwise provided by statute, the standard of proof in a contested case is by a preponderance of the evidence."). This means that the Commission should grant the Companies' applications if the Companies have demonstrated, by a preponderance of the evidence, that the Program should be approved as being consistent with the EE/DSM Mechanism and S.C. Code Ann. § 58-37-20.

The preponderance of the evidence is simply evidence that convinces the fact finder as to its truth. *Pascoe v. Wilson*, 416 S.C. 628, 640, 788 S.E.2d 686, 693 (2016). This is a low burden

[7] The term "free-rider" in this context refers to customers that enroll in the Program, but would have adopted solar PV regardless of the incentive provided by the Program.

of proof which provides that the party with the burden of proof prevails if the fact finder concludes that the evidence presented tips the scales—even slightly—in favor of the party with the burden of proof. Stated differently, "the burden of showing something by a preponderance of the evidence . . . simply require[s] the trier of fact to believe that the existence of a fact is more probable than its nonexistence." *U.S. v. Manigan*, 592 F.3d 621, 831 (4th Cir. 2010).) The record reveals that the Companies have very clearly satisfied this burden of proof, as discussed below.

**2. Evidence in the Record**

At the outset, the Commission notes that when rendering decisions, it is recognized as the "expert designated by the legislature to make policy determinations regarding utility rates." *Southern Bell Tel. and Tel. Co. v. Public Service Comm*., 244 S.E.2d 278 (1978). However, all such decisions must be based upon substantial evidence in the record. *See e.g.*, Commission Order No. 2006-593, issued in Docket No. 2006-107-WS on October 16, 2006. Put another way, the Commission cannot go beyond the four corners of this proceeding when rendering a decision and all such decisions must tie back to substantial evidence in the record. The Commission finds that this Order fulfills that standard.

**B. Overview of S.C. Code Ann. § 58-37-20**

As described above, S.C. Code Ann. § 58-37-20 governs the Commission's consideration of EE/DSM programs and programs that "reduce energy consumption or demand" in South Carolina. The Commission is authorized, under S.C. Code Ann. § 58-37-20, to adopt procedures that encourage electrical utilities and public utilities providing gas services to invest in cost-effective energy efficient technologies and energy conservation programs. S.C. Code Ann. § 58-37-20 requires that these procedures "provide incentives and cost recovery for energy suppliers and distributors who invest in energy supply and end-use technologies that are cost-effective,

environmentally acceptable, and reduce energy consumption or demand." For the purposes of these programs, demand-side activity is defined as "program[s] . . . for the reduction or more efficient use of energy requirements of . . . customers, including but not limited to . . . renewable energy technologies." S.C. Code Ann. § 58-37-20.

The Commission most recently adopted the Companies' revised cost recovery procedures for EE/DSM programs, known as the EE/DSM Mechanism in Order Nos. 2021-32 and 2021-33. In accordance with S.C. Code Ann. § 58-37-20 and as described more fully below, the EE/DSM Mechanism contains parameters applicable to all of the Companies' proposed EE/DSM programs in South Carolina and permits the Companies to recover prudent costs—including program incentives and NLR—related to approved programs that fulfill these parameters.

**C. Overview of the EE/DSM Mechanism**

In Docket Nos. 2013-298-E and 2015-163-E, the Commission approved settlement agreements among the Companies and the ORS, Walmart Inc., Nucor Steel – South Carolina, SCCCL, and SACE, establishing the most recent iteration of the EE/DSM Mechanism. Order Nos. 2021-32 and 2021-33. The parties to those settlement agreements stipulated that each such agreement is "reasonable, is in the public interest, and is in accordance with current law and regulatory policy." *Id*. at Ex. 1, p. 3. Likewise, in approving those settlement agreements and the EE/DSM Mechanism thereunder, the Commission found them to be "just and reasonable and . . . consistent with S.C. Code Ann. § 58-37-20." Order No. 2021-32, p. 5; Order No. 2021-33, p. 6.

The currently approved EE/DSM Mechanism—as developed pursuant to those settlements and implemented by the Commission—requires that EE/DSM programs implemented by the Companies be:

1. commercially available and sufficiently mature;
2. applicable to the utility's service area demographics and climate;
3. feasible for a utility DSM/EE program; and
4. cost-effective.

In approving the EE/DSM Mechanism, the Commission approved the agreement between the parties, including the ORS, that the primary evaluator of cost-effectiveness will be the UCT. *See* Order No. 2021-32; Order No. 2021-33. Although the UCT is used to estimate the potential savings that could be realized by customers, the EE/DSM Mechanism requires these projected savings to be confirmed through an evaluation, measurement, and verification ("EM&V") process conducted by a third party, consistent with the guidelines outlined in the EE/DSM Mechanism. *See id*. This EM&V is conducted once adequate participation allows for a statistically valid sample. EM&V studies will use industry-accepted methods to collect and analyze data; measure and analyze Program participation; and evaluate, measure, verify, and validate the energy and peak demand savings. *See id*. The amount of the utility incentives, if any, are provided for by the EE/DSM Mechanism, and are determined by the EM&V process, as agreed to by the settling parties in those dockets and approved by the Commission. *See* Applications. The specific incentives to be provided were approved by the EE/DSM Mechanism settlement agreements entered into by the ORS in December 2020, and they ensure that the utility is constantly looking out for, and implementing, DSM opportunities that will lower customers' bills. *See id.*

The EE/DSM Mechanism also permits the Companies to recover certain other costs through the Companies' EE/DSM rider. Specifically, the Companies can recover all:

> [R]easonable and prudent Program Costs reasonably and appropriately estimated to be incurred in expenses, during the current rate period, for DSM and EE Programs that have been approved by the Commission as well as any of [the

> Companies'] reasonable and prudent O&M Program Costs to the extent those costs are intended to produce future benefits.

Order No. 2021-32, Ex. 1, pp. 39-40; Order No. 2021-33, Ex. 1, p. 43.

Likewise, the Companies are permitted to recover, through the EE/DSM rider, NLR, which is defined in the EE/DSM Mechanism as:

> [R]evenue losses due to new DSM or EE Measures, net of fuel costs and non-fuel variable operating and maintenance expenses avoided at the time of the kilowatt-hour sale(s) lost due to the DSM or EE Measures, or in the case of purchased power, in the applicable billing period incurred by [the Companies], public utility operations as the result of a new DSM or EE Measure.

Order No. 2021-32, Ex. 1, p. 27 (footnote omitted); Order No. 2021-33, Ex. 1, p. 30 (footnote omitted).

Not only does the EE/DSM Mechanism expressly permit the Companies to recover these costs, but it also specifies the timeframe over which the Companies are permitted to do so. *See* Applications. As described above, the cost savings and corresponding amounts to be recovered by the Companies (whether performance incentives, program costs, or NLR) will be verified and validated during the EM&V process. Once those amounts are calculated, the Companies must file an updated EE/DSM rider with the Commission that proposes to recover those costs. *See id*. Only after the Commission approves that rider may the Companies begin recovering those costs. *See id*. This means that any recoverable EE/DSM costs incurred by the Companies in year 2022 will not be filed as part of a modified EE/DSM rider until 2023. Tr. Vol. 4, p. 635.11 – 635.24. Upon Commission approval of that rider, those costs will be recovered from customers beginning in 2024—two years after the year in which they were incurred. *See id*. This process not only ensures that the costs recovered from customers arise from verified and validated shared savings, but it also contains a correction mechanism for any over-collected revenue. Tr. Vol. 3, p. 611.6 – 611.10. That is, if the Companies collect more revenue than they were entitled to under the EE/DSM

Mechanism, they are required to pay that over-collected revenue back to customers, with interest. *See id.*

Taken together, the EE/DSM Mechanism and corresponding EM&V process place the Companies' suites of EE/DSM programs under continuous scrutiny to ensure that the programs result in verified and validated benefits to customers, and to ensure that the Companies' cost recovery is tied to actual cost savings generated by the Companies' investment in EE/DSM programs.

## III. OVERVIEW OF STAKEHOLDER PROCESS, EE/DSM COLLABORATIVE, AND SETTLEMENT PROCESS

The Program was developed and influenced through numerous stakeholder interactions, including: (1) broader stakeholder workshops, which began in March of 2020, (2) settlement discussions with a group of stakeholders that expressed interest in finding common ground on a number of clean-energy matters, including EE/DSM, and (3) the EE/DSM Collaborative, which first discussed the Program in November of 2020.

### A. Stakeholder Workshops

As described by Witness Ford, the Companies organized two initial stakeholder workshops—in March and April of 2020—to solicit feedback regarding, among other things, the implementation of certain provisions within Act 62. Tr. Vol. 4, p. 724.20 – 725.5. A review of the record indicates that the group of stakeholders at these meetings was diverse in their interests, which included groups representing business and environmental interests in South Carolina, as well as the ORS, which is tasked with representing the public interest as defined in S.C. Code Ann. § 58-4-10(B). Tr. Vol. 4, p. 724.20 – 724.23; S.C. Code Ann. § 58-4-10(B). Witness Ford noted that the discussions at these broader workshops led to additional discussions with smaller groups about certain discrete items mentioned during the workshops—including potential EE/DSM

offerings. Tr. Vol. 4, p. 725.18 – 726.15. These additional discussions are described below and ultimately led to the Companies finding common-ground on numerous clean-energy items with a broad group of stakeholders. Tr. Vol. 4, p. 726.16 – 726.20. This agreement is memorialized by a Memorandum of Understanding ( "MOU") that was first placed before the Commission on December 4, 2020.[8] Tr. Vol. 3, p. 615.18. The MOU—including the Program proposed in these proceedings—was presented to this broad group of stakeholders, including the ORS, at a third stakeholder workshop hosted by the Companies on September 23, 2020. Tr. Vol. 4, p. 727.2 – 727.6.

**B. Settlement Process**

As explained by Witness Ford, although the broader stakeholder meetings involved many participants and covered various topics, certain stakeholders came to the Companies to discuss discrete items in more detail. Tr. Vol. 4, p. 725.18 – 725.24. Witness Ford pointed out that not only did the Companies engage various stakeholders on discrete issues outside of the broader workshops, but the Companies specifically engaged the ORS months prior to the first broader workshop. Tr. Vol. 4, p. 723.20 – 724.7. Since January of 2020, the Companies and various stakeholders engaged the ORS to discuss broad procedural and stakeholder issues, which evolved over time to settlement discussions regarding a broad range of topics, including the "ultimately to be proposed energy-efficiency program and . . . incentive." Tr. Vol. 4, p. 726.3 – 726.15.

The MOU itself represents an overarching agreement to advance a clean-energy future in South Carolina and contains provisions ranging from EE and DSM to NEM. As it relates to these proceedings, the MOU outlined the specifics of the Program proposed in these proceedings. These

[8] Parties to the MOU included the Companies, NCSEA; Southern Environmental Law Center on behalf of CCL, SACE, and Upstate Forever; Sunrun Inc.; and Vote Solar (the "Settling Parties").

provisions were first placed before the Commission on December 4, 2020, and the Program proposed in these proceedings reflects the components agreed-upon by the Settling Parties in the MOU.

**1. Program Components**

As described in the Applications, the Program is designed to encourage reductions in energy consumption by incentivizing the installation of solar PV at residential premises by reducing financial barriers and promoting adoption and installation of PV facilities for eligible customers—just as other EE programs do for home equipment like high efficiency heat pumps and water heaters. The Program would defray the upfront costs of solar PV by providing an incentive reflective of the system benefits that such installations provide. The Program is designed to incentivize new residential rooftop solar PV installations for the purpose of reducing behind-the-meter customer energy consumption while not reducing function for the customer. To that end, the Companies propose to offer an incentive for each new watt of solar PV installed by customers with all electric service within the Solar Choice Program. The Program's availability is being limited to customers with all electric rates in order to support the Program's cost-effectiveness, as this will ensure that customers with gas service for water heating, cooking, clothes drying, and environmental space conditioning do not apply. Pursuant to the MOU referenced above, and to reflect the value of the anticipated savings, the Companies propose an upfront rooftop solar incentive of $0.36/Watt-DC. The incentive may be assigned to a solar leasing company if the customer is in a lease arrangement, or it may be assigned to an installer, at the customer's direction.

Customers enrolling in the Program would be required to remain in the Program for 25 years and also enroll in the Winter BYOT Program, as approved by the Commission in Order No. 2020-831. If the customer unenrolls from the Winter BYOT Program or opts out of more demand

response events than the Winter BYOT Program allows, the customer must repay a prorated share of the initial incentive for every year the allowance is exceeded. There would be no penalty if a customer moves out of the residence prior to the expiration of the 25-year time period. To support the achievement of higher cost savings and EM&V results, the proposed Program also requires that installations of solar PV systems be performed by an approved contractor.

### C. EE/DSM Collaborative

The Companies also presented the proposed Program to a stakeholder group that—contrary to the broader group mentioned above—focuses exclusively on EE/DSM matters. Tr. Vol. 3, p. 600.7 – 600.25. This group is called the EE/DSM Collaborative and is comprised of 35 members from 25 different organizations. Tr. Vol. 1, p. 90.15. The Companies host the EE/DSM Collaborative six times per year, meeting for four to five hours each session. Tr. Vol. 3, p. 600.7 – 600.25. Through the Collaborative, the Companies are able to provide EE/DSM proposals for discussions with and input from third parties with the aim of proposing a well-vetted program that is supported by a variety of stakeholders, thereby avoiding contentious proceedings before the Commission. Tr. Vol. 1, p. 90.1 – 90.12. Relevant to these proceedings, the Companies presented the Program during two of the Companies' quarterly DSM/EE Collaborative meetings before filing—in November of 2020 and January of 2021—with the ORS in attendance for both. Tr. Vol. 2, p. 282.15.

## IV. SUMMARY INTRODUCTION TO COMMISSION'S DECISION

For the reasons set forth in this Order, the Commission approves the Program proposed in the Companies' Applications. The Program arises out of S.C. Code Ann. § 58-37-20, which governs the Commission's consideration of EE/DSM programs and programs that reduce customer demand in South Carolina, and which expressly includes renewable energy technology as an

acceptable demand-side activity. It is well-known that these types of programs in South Carolina are governed by S.C. Code Ann. § 58-37-20 and the corresponding EE/DSM Mechanism approved pursuant to Order Nos. 2021-32 and 2021-33. Further, while there were disputes in these proceedings about how to characterize the Program, it was undisputed that the Program will reduce customer demand with the use of renewable energy technology, which is consistent with the plain language and intent of S.C. Code Ann. § 58-37-20.

The Commission is unpersuaded by the ORS's argument that additional cost recovery restrictions should be imposed on EE/DSM programs in South Carolina. Specifically, the ORS argued that S.C. Code Ann. § 58-40-20(I)—a prohibition on NEM cost recovery previously allowed under Act 236—should also apply to EE/DSM programs in South Carolina. As explained in more detail herein, that provision was enacted with a suite of NEM provisions within Act 62 and exclusively addresses electrical utilities' recovery of lost revenues associated with Act 236 NEM programs. As such, this provision does not impact cost recovery allowed for EE/DSM programs under the EE/DSM Mechanism and does not refer to the NLR, which the Companies are permitted to recover for approved EE/DSM programs. The ORS further argued that S.C. Code Ann. § 58-40-20(I) should apply in this case because customer-generators can participate in the Program, and that section prohibits utility recovery of lost revenue associated with "customer-generator programs." However, the Program proposed in these proceedings is not a customer-generator program. The definition of "customer-generator" within Act 62 focuses on customer PV systems that operate in parallel with and export energy to the utility system—a primary concern of NEM—not the exclusive behind-the-meter focus of EE/DSM. Furthermore, if the Commission were to accept the ORS's interpretation, it would effectively bar the Companies from recovering

NLR for other EE/DSM programs in which customer-generators may participate. This result would run counter to the intent of the EE/DSM Statute to reduce customer demand.

As such, the Commission evaluated the Companies' Applications and proposed Program through the accepted, well-settled provisions in South Carolina that govern EE/DSM programs—S.C. Code Ann. § 58-37-20 and the EE/DSM Mechanism. A review of the record reveals that the Program complies with the applicable requirements of S.C. Code Ann. § 58-37-20 and the EE/DSM Mechanism. The Companies demonstrated this compliance through data-driven analysis, consistent with the requirements of the EE/DSM Mechanism. First, the Companies' demonstrated the quantitative justification of the Program through the primary cost-effectiveness test for EE/DSM programs, known as the UCT. Using traditional inputs and utilizing conservative assumptions, the Companies demonstrated that the Program well exceeded the required UCT score of 1.0 with an actual score of approximately 2.0 for both DEC and DEP. As explained in testimony, a UCT score of 2.0 means that the savings to customers exceed the associated costs on a two-to-one basis. Taken together, the Companies estimate that the Program will result in approximately $18,000,000 of net benefits for their customers. Further, these savings will be validated through EM&V and will inform the Companies' cost recovery.

In its challenge of the Companies' proposal—in contrast to the Companies' transparent data-driven cost-effectiveness analysis— the ORS repeatedly relied upon concepts and arguments that were based neither in well-established South Carolina law nor in well-settled practices before, and decisions of, this Commission. Notably, the ORS not only suggested that the Commission treat the TRC on par or more favorably than the UCT—in contravention of the parties' agreement under the approved EE/DSM Mechanism settlement—but it also suggested that the Companies should use non-standard inputs in their cost-effectiveness analysis. However, the ORS admitted that these

recommendations and its approach in general focuses only on the costs of the Program. As such, the Commission declines to change standard practice in South Carolina—particularly when it would have the net effect of withholding millions of dollars in benefits from utility customers in South Carolina. In addition to the quantitative justification under the EE/DSM Mechanism, the Companies also demonstrated the qualitative success of the Program— which is undisputed in these proceedings.[9]

The Program also meets the requirements of S.C. Code Ann. § 58-37-20, which makes clear that EE/DSM measures can include energy supply technologies, must be cost-effective, environmentally acceptable, and reduce energy consumption or demand. The use of solar as a generation resource for EE embodies each of these qualities. Although these provisions outline the specific parameters for EE/DSM programs in South Carolina, the ORS repeatedly advocated that the Commission ignore South Carolina law and well-settled EE/DSM concepts in South Carolina by considering concepts that are foreign to—and in some cases, contrary to—South Carolina law and the EE/DSM Mechanism. Specifically, the ORS advocated that the Commission rely upon certain third-party definitions of EE—rather than the statutory definition provided by the South Carolina General Assembly that was designed to expressly apply to "electrical utilities and public utilities . . . subject to the jurisdiction of the Commission"—including a narrow definition of EE advanced by the United States Energy Information Administration ("EIA") that when looked at in its narrowest form would essentially exclude solar from ever being considered EE device, despite the prior solar water heating pilot being accepted as EE in the past. With these definitions, the ORS tries to turn the Commission's focus away from the reductions in customer demand prioritized in

[9] As described above, the EE/DSM Mechanism requires the Program to be: (1) commercially available and sufficiently mature, (2) applicable to the Companies' service area demographics and climate, and (3) feasible for the Companies' EE/DSM program.

S.C. Code Ann. § 58-37-20 and towards inapplicable and narrow definitions that serve ORS's goal of opposing the Program.

The Commission is simply unable to ignore the plain language of the South Carolina EE/DSM Statute enacted by the General Assembly and will decline to utilize third-party definitions of EE to govern programs in this state—particularly given the legislature's adoption of a specific statute applicable to the regulation of South Carolina public utilities. The record in these proceedings reveals that solar can in fact serve as an EE measure because it encourages behind-the-meter self-consumption and alleviates strain upon the grid. Moreover, the ORS's arguments wholly ignore the purpose of EE/DSM programs in South Carolina, which is to reduce energy demand on the grid in order to benefit all customers. For example, a household that is not connected to the grid can utilize EE measures, but surely no one would expect the Companies to offer an incentive for those measures given that the overall utility system and customers at large do not realize any benefits that would justify the expenditure of those incentives. Importantly, the Program is projected to result in significant cost savings for the Companies' customers. Just as with any other EE/DSM program, the Companies will use the third-party EM&V process to validate those savings and inform the Companies' cost recovery. As discussed by Witness Moore during the hearing, this effectively places "pilot-like" restrictions upon the Program. The independent EM&V process is conducted by a third party and acts as a true-up process that can evaluate: (1) adoption rate of the Program, (2) customer bill savings, and (3) effects on participating and non-participating customers. Moreover, recoverable NLR will ultimately be based on kilowatt hour ("kWh") sales reductions and kWh savings verified by the EM&V process and approved by the Commission. In other words, EE NLR are only recovered when there is evidence of quantifiable savings for all customers resulting from an EE/DSM program, and which

would not have occurred but for the EE/DSM program. As such, the Commission believes full implementation of the Program ensures that the appropriate safeguards are in place to mitigate whatever risk arises to customers.

Additionally, the Program drives additional value to customers through synergistic alignment with the Companies' Solar Choice and Winter BYOT Program. Specifically, customers enrolling in the Program must participate in Solar Choice and also agree to remain in the Winter BYOT Program for 25 years. When used in conjunction with the rates under the Solar Choice Tariffs and the Winter BYOT Program, the Program will not only reduce consumption from the grid, but also has the ability to optimize customer consumption during peak use periods and reduce the utility's peak use demand. Although customers must agree to a 25-year contract under the Winter BYOT Program, the Program will be flexible enough to accommodate emerging technologies, given that the 25-year term only relates to control over the customer's heating load, not the specific technology utilized to do so.

Not only does the Program achieve the applicable EE/DSM tenets within South Carolina law and provide significant value to customers, but it is also the result of an important compromise among parties that typically have competing interests. As described herein, the conceptual design of the Companies' proposed Program was developed pursuant to the MOU that was first placed before the Commission on December 4, 2020. Although the ORS now opposes the Program, the record reveals that it had ample time and opportunity to provide feedback to the Companies to shape this filing. Specifically, the record in these proceedings reveals that the ORS: (1) attended the broader stakeholder workshops, which discussed the Program in early 2020, (2) was presented with the proposed settlement, including the concept of the EE/DSM program, before the parties executed the MOU, (3) was present throughout the EE/DSM Collaborative meetings at which the

proposal was presented. However, the record also reflects that the ORS declined to join in settlement discussions and elected not to comment on the Program during the broader stakeholder meetings or the EE/DSM Collaborative. In response to questions related to their inaction, the ORS explained that current ORS policy is to not comment or participate in development of programs that it "will turn around and regulate."[10] A program with broad support among typically competing interests should be applauded, particularly given that it not only achieves the applicable parameters within South Carolina law, but it also provides millions of dollars in benefits to customers throughout South Carolina. As such, the Commission encourages the parties, including the ORS, to meaningfully participate in these collaborative processes going forward.

In short, the Program creatively combines: (1) a rooftop solar incentive, (2) an all-electric service requirement, and (3) a 25-year commitment to the Winter BYOT demand response program. This is not a gamble as characterized by the ORS. Rather this is a carefully designed, cost-effective bundle of measures whose cost-savings will be objectively validated by an independent third party after implementation. The Program proposed in this case is a package of measures and programs that collectively and synergistically result in measurable avoided electricity production, capacity, and transmission and distribution costs. The proposed Program is fully consistent with S.C. Code Ann. § 58-37-20 and the EE/DSM Mechanism. Therefore, the Commission finds that the Program is approved.

For these reasons and those set forth below, the Commission approves the Program as proposed by the Companies in these proceedings.

## V. PRELIMINARY MATTERS

### A. Inapplicability of S.C. Code Ann. § 58-40-20

[10] Tr. Vol. 2, p. 253.20 – 253.1.

As discussed throughout this Order, much of the testimony in these proceedings related to the threshold matter of whether S.C. Code Ann. § 58-40-20(I) operates to bar the Companies from recovering certain costs associated with EE/DSM programs. By way of background, S.C. Code Ann. § 58-40-20(I) codifies the provisions of Act 62 related to NEM, customer-generator tariffs, and cost recovery. Prior to the passage of Act 62, Act 236 codified these rules and required the Commission to "initiate a generic proceeding for purposes of implementing the requirements of this chapter with respect to the net energy metering rates, tariffs, charges, and credits of electrical utilities." S.C. Code Ann. § 58-40-20(F)(4). In Order No. 2015-194, the Commission approved parameters for NEM programs under Act 236 including: (1) a 1:1 solar valuation rate ("1:1 rate") pursuant to which kWh of energy generated and consumed by an NEM customer-generator would be at least as valuable, for ratemaking purposes, as a kWh of power supplied to that customer from the utility grid, (2) a methodology (the "Methodology") to value the energy generated by the customer-generator that was exported to the utility's system, and (3) provisions permitting utilities to recover incentive costs from customers as a component of their respective DER programs, subject to the limitations of South Carolina law (the "NEM Incentive"). Order No. 2015-194, Ex. 1, Section II (3); *Id.* at 19-20. The NEM Incentive is a DER program cost and represents the remaining positive value, if any, after the value of generation under the Methodology is subtracted from the 1:1 rate. Order No. 2015-194 makes clear that this remaining positive value is "lost revenue" which the utilities are permitted to recover in the form of the NEM Incentive in the narrow framework of NEM under Act 236. *Id.* at 21, 26.

Act 62 required the establishment of new NEM programs, but extended the terms and conditions provided to all parties in Commission Order No. 2015-194 to all customer-generators

who applied for NEM before June 1, 2021.[11] S.C. Code Ann. § 58-40-20(B). Act 62 further delineated between the existing NEM programs, which were intended to jumpstart NEM, and the new Solar Choice programs by establishing new rules related to utility cost recovery in S.C. Code Ann. § 58-40-20(I), which provides:

> Nothing in this section, however, prohibits an electrical utility from continuing to recover **distributed energy resource program costs in the manner and amount approved by Commission Order No. 2015-194** for customer-generators applying before June 1, 2021. Such recovery shall remain in place until full cost recovery is realized. Electrical utilities are prohibited from recovering lost revenues associated with customer-generators who apply for customer-generator programs on or after June 1, 2021.

S.C. Code Ann. § 58-40-20(I). (emphasis added).

This section specifically and exclusively addresses the "lost revenues" recovered through existing DER programs and prohibited that form of recovery from continuing under Act 62's Solar Choice programs. Tr. Vol. 4, p. 600.7 – 600.25. In contrast, the Companies, through the Applications filed in these proceedings, request approval of an EE program that provides for the recovery of NLR as limited to and defined S.C. Code Ann. § 58-37-20 and the associated EE/DSM Mechanism—a completely distinct concept and framework that is based on different public policy. Those lost revenues under Solar Choice are distinct from NLR recovery associated with EE/DSM programs. As described in the Companies' legal brief submitted on December 3, 2021, lost revenues, as referenced in Order No. 2015-194 and S.C. Code Ann 58-40-20(I) of Act 62, refer to those revenues associated with providing the 1:1 retail rate credit for Act 236 NEM customers. Moreover, NEM revenues are calculated using the total generator output, whereas energy efficiency NLR are derived only from reductions in customer demand and correspond only to those

[11] This topic is also the subject of separate briefs submitted by the parties on December 3, 2021. The briefs were submitted at the request of Vice Chair Belser.

energy savings caused by the Program. Finally, NEM lost revenues are recoverable from customers as long as the NEM customer receives the 1:1 rate, while EE NLR are only recoverable for 36 months, pursuant to the EE/DSM Mechanism. Although discussed in detail in this Order, the Companies are permitted to recover NLR associated with approved EE/DSM programs—including the Program proposed in these proceedings—and such recovery is not affected by S.C. Code Ann. § 58-40-20(I), which relates exclusively to NEM programs.

**B. ORS Motion for Summary Judgment**

On September 27, 2021, the ORS filed a motion for summary judgment, which argued that, under South Carolina law, the Companies are prohibited from recovering lost revenue associated with the Program, and the Companies' Applications should be dismissed with prejudice. ORS Motion for Summary Judgment at 5. In the alternative, the ORS argued that the Companies should amend the Applications to remove their request for recovery of lost revenues. *See id*. The Companies filed a response to the ORS's Motion for Summary Judgment on October 7, 2021, which noted that the Program is an EE/DSM Program and argued that the Motion for Summary Judgment was improper because there "are genuine issues of material fact" in dispute. Companies' Response in Opposition for Summary Judgment at 19. The Clean Energy Intervenors also filed a joint response in opposition to the ORS's Motion for Summary Judgment on October 7, 2021. On October 14, 2021, the ORS filed its reply to the Companies' and the Clean Energy Intervenors' responses and appeared to concede that the Program could qualify as an EE/DSM program.[12] The ORS also stated that it did not claim a legal prohibition on the Program being qualified as an

[12] "ORS remains entitled to the Summary Judgment even *if* the Programs achieve applicable EE/DSM standards." ORS's Reply to Responses at 12. (emphasis in original.)

EE/DSM program but instead argued that the prohibition was on recovery of lost revenues. [13] The Commission heard oral arguments on the ORS's motion on October 28, 2021, and the ORS's motion was denied. Tr. Vol. 1, p. 37.10 – 37.11.

**C. The Companies' Motion to Affirm Legal Standards**

On October 7, 2021, the Companies filed—in addition to their response to the ORS's Motion for Summary Judgment—a Motion to Affirm Legal Standards and requested that the Commission issue an order declaring that: 1) the Commission would evaluate the Program under S.C. Code Ann. § 58-37-20 and the EE/DSM Mechanism; 2) the cost recovery for the Program proposed in these proceedings, as EE/DSM programs, will be governed by S.C. Code Ann. § 58-37-20 and the Commission-approved EE/DSM Mechanism, and therefore, the lost revenue recovery provision contained within S.C. Code Ann. § 58-40-20(I) does not apply; and 3) the UCT is the determinative test for testing the cost-effectiveness of EE/DSM programs. *See* Companies' Motion to Affirm Legal Standards. On October 18, 2021, the ORS filed a response to the Companies' Motion to Affirm Legal Standards alleging that: 1) the motion sought to improperly restrict the ORS's ability to present only testimony and evidence that conformed with the Companies' selective interpretation of S.C. Code Ann. §§ 58-37-20 and 58-40-20; 2) the motion was procedurally improper because it was actually a petition for a declaratory order rather than a motion, it did not comport with the filing requirements for a petition, and the ORS should have been entitled to 30 days to file its answer to the request; 3) the motion was filed under the guise of seeking to affirm legal standards but was really a motion to preclude testimony, which would limit the Commission's purview and the ORS's ability to represent the public interest; and 4) the motion

[13] "ORS' Motion made clear that ORS did not claim a legal prohibition exists to the Programs moving forward as EE/DSM programs, but *only as to the Program's recovery of lost revenues*." *Id*. (emphasis in original.)

was the second time the Companies made aggressive efforts to limit the ORS's ability to offer meaningful testimony and evidence regarding the Program, which would diminish the transparency of the proceedings. *See* ORS's Response in Opposition to Motion to Limit Certain Testimony. The Companies filed a reply on October 20, 2021, highlighting that clarity on the legal standards to be applied to the proposed Program would lead to hearing efficiency and limit irrelevant evidence in the record that could unduly prejudice the Companies' Applications. *See* Reply to ORS's Response to Motion to Affirm Legal Standards. The Commission heard oral arguments on the Companies' motion on October 28, 2021, and the motion was denied. Tr. Vol. 1, p. 42.19 – 42.20.

**D. The ORS's Motions to Strike**

**1. Motion to Strike Testimony of the Companies**

On October 13, 2021, the ORS filed a Motion to Strike Certain Testimony and specifically requested that the Commission strike Witness Ford's testimony at Page 4, Lines 15-17 and at Page 5, Lines 16-18 and Witness Huber's testimony at Page 7, Lines 4-6 as those sections contained—in the ORS's view—"improper legal opinion." ORS Motion to Strike Certain Testimony at 1. Oral arguments were made by the parties when the Companies asked that the pre-filed rebuttal testimony of Witnesses Ford and Huber be moved into the record, and after consideration of the arguments made by the parties, the ORS's motion was denied. Tr. Vol. 4, p. 682.3. The ORS also raised its objection to certain additional portions of Witness Huber's pre-filed testimony. The ORS's October 13, 2021 Motion to Strike Certain Testimony requested that the Commission strike Witness Huber's testimony at Page 7, Line 21 through Page 8, Line 9 as that section contained reference to a study conducted by the Companies that had not previously been discussed in the Companies' direct testimony. ORS Motion to Strike Certain Testimony at 3-4. After consideration

of the arguments made by the parties, the ORS's motion on the grounds of new evidence improperly raised in rebuttal testimony for the first time was granted, and Witness Huber's rebuttal testimony at Page 7, Line 21 through Page 8, Line 9 was stricken from the record as requested. Tr. Vol. 5, p. 701.5.

**2. Motion to Strike Testimony of Witness Moore**

October 18, 2021, the ORS filed a Motion to Strike Certain Testimony and specifically requested the Commission strike Witness Moore's testimony as follows:

- Page 1, Lines 14-15
- Page 2, Lines 4-7 and 10-11
- Page 5, Lines 1-3 and 5-6
- Page 7, Lines 9-23
- Page 8, Lines 1-15 and 19-20
- Page 11, Lines 10-20
- Page 12, Lines 1-3
- Page 12, Lines 7-8[14]

The ORS's motion alleged those sections of Witness Moore's testimony contained improper legal opinions and exceeded the scope of surrebuttal by responding to the ORS's direct testimony. ORS Motion to Strike Certain Testimony at 6. Oral arguments were made by the parties when the Clean Energy Intervenors asked for the pre-filed rebuttal testimony of Witness Moore be moved into the record, and after consideration of the arguments made by the parties, the ORS's motion was denied. Tr. Vol. 6, p. 926.3.

[14] ORS Motion to Strike Certain Testimony at 5-8.

## VI. FINDINGS OF FACT AND CONCLUSIONS OF LAW

Having heard the testimony of the witnesses and representations of counsel and after careful review of all evidence in the record, the Commission hereby makes the following findings of fact and conclusions of law:

### A. Compliance with Applicable South Carolina Law

1. The Program constitutes an acceptable program under S.C. Code Ann. § 58-37-20.

2. As required by S.C. Code Ann. § 58-37-20, the Program is comprised of measures that (i) are cost-effective, (ii) are environmentally acceptable, and (iii) reduce energy consumption or demand.

3. Solar PV is a renewable energy technology that is eligible for EE/DSM programs under South Carolina law, is expressly listed as an eligible demand-side activity within the applicable EE/DSM statute, and can therefore serve as an EE/DSM measure as proposed in these proceedings.

4. The Commission is bound by the requirements articulated in S.C. Code Ann. § 58-37-20 and cannot substitute third-party definitions of EE in place of what the General Assembly has clearly defined as demand-side activity in South Carolina.

5. Solar PV reduces demand on the utility system as required by S.C. Code Ann. § 58-37-20.

6. Focusing on utility system impacts, rather than only device-level impacts, is authorized by the EE/DSM statute and consistent with the fundamental purpose of EE/DSM programs, which is to cost-effectively reduce demand upon the grid.

7. The Program fulfills the applicable qualitative requirements under the EE/DSM Mechanism. As required by the EE/DSM Mechanism, solar PV is:

   - Commercially available and sufficiently mature;
   - Applicable to the Companies' service area demographics and climate; and
   - Feasible for ana EE/DSM program inasmuch as solar PV is routinely installed on the Companies' systems and the proposed Program passes the UCT.

8. The Program fulfills the applicable quantitative requirements under the EE/DSM Mechanism.

   - The Program surpasses the required score under the UCT, which is the primary test under which the Commission evaluates EE/DSM programs.

   - The results indicate that the Program will result in significant cost savings for all customers.

**B. Cost Recovery**

1. The Companies will be able to recover "net lost revenues" associated with programs that fulfill these parameters, as provided for in S.C. Code Ann. § 58-37-20 and the EE/DSM Mechanism.

2. The prohibition on recovery of lost revenue within S.C. Code Ann. § 58-40-20(I) (i) refers only to customer-generator programs (i.e., NEM programs), (ii) sets parameters for recovery of the NEM Incentive under Order No. 2015-194, and (iii) does not impact the allowed recovery for EE/DSM programs.

**C. Protections to Ratepayers Afforded by the EM&V Process**

1. The Program will be subject to the EM&V process, which effectively places "pilot-like" restrictions upon the Program.

2. This process will be conducted by an independent third-party evaluator and will ensure that verified data matches the actual projected savings so that customers are only paying for the measured net energy savings associated with the Program. If the EM&V process reveals that the Companies "over collected" revenue, that will be paid back to customers, with interest.

3. The EM&V process is sufficient to ensure that the Companies' investment in EE/DSM programs will save ratepayers money relative to the investments in supply-side resources that would be required absent the programs.

**D. Additional Benefits Realized Through Program Design**

1. Pairing the Program with the Solar Choice and Winter BYOT programs represents an innovative approach that will provide additional benefits to customers.

2. When utilized in conjunction with the rates under the Solar Choice Tariffs and the smart thermostat under the Winter BYOT Program, the Program not only reduces consumption from the grid, but actually can optimize customer

consumption during peak use periods and can reduce the utility's peak use demand.

3. Although customers must agree to a 25-year contract under the Winter BYOT Program, the Program will be flexible enough to accommodate emerging technologies given that the 25-year term only relates to control over the customer's heating load, not the specific technology utilized to do so.

4. This 25-year term is reasonable and provides sufficient customer protections given that the customers can opt-out of such term and will only be required to pay back a pro-rated portion of the incentive.

## VII. EVIDENCE AND CONCLUSIONS

The evidence in support of these findings of fact and conclusions of law is found in the verified pleadings, testimony, and exhibits in these dockets, and the entire record in these proceedings.

**EVIDENCE AND CONCLUSIONS SUPPORTING FINDINGS OF FACT AND CONCLUSIONS OF LAW A(1)-A(8)**

Summary of the Evidence

Although the parties provided testimony regarding the applicable provisions of South Carolina law, all parties evaluated the Program under the applicable EE/DSM provisions of South Carolina law—S.C. Code Ann. § 58-37-20 and the EE/DSM Mechanism.

### A. Compliance with S.C. Code Ann. § 58-37-20

The Companies' Applications outlined the requirements of South Carolina law relative to these EE/DSM proceedings. S.C. Code Ann. § 58-37-20 requires that incentives and corresponding cost recovery be provided to "energy suppliers and distributors who invest in energy supply and end-use technologies that are cost-effective, environmentally acceptable, and reduce energy consumption or demand." S.C. Code Ann. § 58-37-20; Applications at 5. (emphasis omitted). The Applications explained that "renewable energy technologies" are expressly cited in S.C. Code

Ann. § 58-37-20 as a potential EE/DSM measure. Applications at 5. (emphasis omitted). The Applications outlined the Companies' position that the Program proposed in these proceedings falls squarely within the parameters of this section of South Carolina law because solar PV facilities are "energy supply and end-use technologies" that are "cost-effective, environmentally acceptable, and reduce energy consumption or demand." *Id*. The Applications also noted that solar is a renewable energy technology, which is a vehicle for EE/DSM that is expressly contemplated by the statute. *Id*.

Witness Duff further testified to the Program's compliance with S.C. Code Ann. § 58-37-20 by noting that the Program "would literally reduce the energy requirements of the utility and its customers through renewable energy technologies." Tr. Vol. 1, p. 57.5. Witness Duff drew parallels to other EE/DSM programs that were approved by the Commission under S.C. Code Ann. § 58-37-20 such as the Companies' solar water heating program, which similarly uses energy from the sun to reduce consumption from the grid. *See id*.

However, although Witness Horii specifically cited language from S.C. Code Ann. § 58-37-20 that stipulates renewable energy technologies may serve as an EE/DSM measure, he sought to disqualify solar PV from being considered as an EE/DSM measure by this Commission in any proceeding because solar PV is a generator that results in reduction in consumption at the grid level, but not at the device level. Tr. Vol. 3, p. 537.7. It is upon this distinction that Witness Horii argued the Commission should reject the Program in its entirety. *See id*. In support of this recommendation, Witness Horii did not point to South Carolina law, but rather relied upon two third-party definitions of EE that focused upon the device level—one definition from the EIA and the other from the Environmental and Energy Study Institute ("EESI"). Tr. Vol. 3, p. 459.8. According to Witness Horii, these definitions of EE require there to be less energy used at the

device level, and solar PV only ensures reductions in usage at the grid level. Tr. Vol. 3, p. 536.15 – 536.17. Witness Horii utilized these other definitions in an attempt to distinguish the Solar Water Heating Program cited by Witness Duff and claimed that that program is not similar to the Companies' proposal here because the water heating program actually reduces electricity usage. Tr. Vol. 3, p. 537.7 – 537.24. However, Witness Horii went one step further to recommend to the Commission that self-generation, in whatever form, should not be classified as EE and points to California in support of this claim. Tr. Vol. 3, p. 512.16 – 512.18. Witness Horii opined that if the Program were approved, it would open the door for a "customer-sited generator that uses diesel fuel and has a cast iron skillet welded above the combustion chamber" to qualify as EE. Tr. Vol. 3, p. 459.12. Similar to Witness Horii, ORS Witness Morgan also pointed to definitions from third parties, including the EIA and North Carolina, to ultimately suggest to the Commission that solar PV cannot be considered an EE measure because it does not reduce "the consumption of any end-use household equipment" for the customer. Tr. Vol. 2, p. 224.23 – 224.24.

In response, Witness Moore disputed Witness Horii's characterization and noted that solar PV falls under the broad authorization of S.C. Code Ann. § 58-37-20. Tr. Vol. 6, p. 927.1 – 927.7. Likewise, Companies' Witness Duff explained that the ORS's testimony takes an inappropriately limited view of S.C. Code Ann. § 58-37-20 which, in reality, "casts a very wide net for cost-effective EE/DSM programs." Tr. Vol. 6, p. 927.1 – 927.7. Witness Moore noted that a primary purpose of EE/DSM programs is to drive "systemwide efficiencies." Tr. Vol. 1, p. 200.24 – 200.25. Witness Moore explained that this is the case even in the context of EE/DSM programs that focus on end-use efficiencies given that they aim to "cost-effectively leverage efficiencies further up the system." Tr. Vol. 1, p. 200.20 – 200.21.

Witness Duff testified that—contrary to the ORS's position—South Carolina law focuses on reductions in energy usage from the grid, no matter where those reductions occur. Tr. Vol. 3, p. 927.1 – 927.7. Witness Duff continued to testify to the applicable provisions of South Carolina law and noted that even the UCT under the EE/DSM Mechanism undercuts the ORS's position because the UCT is "exclusively focused on reductions in grid energy usage, and this is precisely what the Program proposed in these proceedings would achieve." Tr. Vol. 3, p. 576.5. Witness Duff cited the Commission's Order No. 2021-569 in Docket No. 2019-182-E (the "Generic Docket"),, which stated that "all self-generation that is consumed by a customer-generator within the billing period is, from the system perspective, equivalent to energy efficiency or demand side management measures as a decrement to system load." *Id*. Witness Duff acknowledged that the Program is innovative and would be the first of its kind in South Carolina, but that is not a reflection upon whether solar PV should be EE—rather, it reflects current economic and market conditions associated with solar PV that did not previously exist. Tr. Vol. 3, p. 576.6. Witness Duff explained that Witness Horii's attempt to disqualify all self-generation from serving as EE "demonstrates Mr. Horii's lack of understanding of the Companies' existing portfolio of EE and DSM programs." Tr. Vol. 3, p. 576.7. Witness Duff pointed to the Companies' Combined Heat and Power program ("CHP") as an example of a generator serving as an EE/DSM program in South Carolina—one that was approved by the Commission and supported by the ORS. *Id*. Likewise, Witness Duff disputed the distinction drawn by Witness Horii between this proposal and other programs approved by the Commission, such as the Solar Water Heating program. Tr. Vol. 3, p. 576.9. Witness Duff explained that both of these programs eliminate energy waste along with consumption from the grid—which actually comports with the EESI definition provided by Witness Horii. *Id*. In the end, Witness Duff characterized the ORS's position as ignoring the

"overall goals and resulting savings from EE/DSM programs" simply because Witness Horii does not view it as a "traditional" offering. Tr. Vol. 3, p. 576.10.

Witness Huber echoed Witness Duff's testimony and noted that there are plenty of EE definitions utilized within the industry, but the relevant definition for these proceedings is the definition provided by South Carolina law in S.C. Code Ann. § 58-37-20, which is designed specifically for the regulation of public utilities. Tr. Vol. 4, p. 798.20 – 799.25. Witness Huber noted that if the Commission were to simply ignore the South Carolina law specific to public utilities, it would find that there are a broad range of EE definitions in the industry and that certain definitions—even those used by different agencies within the federal government—may conflict. Tr. Vol. 4, p. 797.15 – 797.17. According to Witness Huber, this underscores the broad-ranging nature of potential EE programs but that the Commission should not lose sight of the primary purpose underlying all EE/DSM measures—reducing consumption from the shared utility system to created shared savings for customers. Tr. Vol. 4, p. 799.4 – 799.6. Witness Huber provided an example based upon a cabin in the woods that is disconnected from the utility's grid. Tr. Vol. 5, p. 862.1 – 862.10. Witness Huber explained that if the Companies were to adopt Witness Horii's definition of EE, the Companies could offer incentives that have no effect on the grid—such as "candle efficiency" in a cabin in the woods—no one would seriously argue that the Companies should provide such an incentive. Tr. Vol. 5, p. 862.6. Witness Huber explained that this highlights the fundamental purpose of EE/DSM programs—they are designed to reduce demand on a shared utility system, which results in savings to all customers. *Id*.

In response, the ORS maintained its singular focus on the distinction between benefits realized at the end-use device and those realized by the grid to argue that solar PV simply cannot serve as EE in any context—even though self-consumption and approved EE/DSM measures both

act as decrements to system load. Tr. Vol. 2, p. 235.7. In fact, Witness Morgan foreclosed the opportunity for any source of generation to be considered EE/DSM, no matter its effects on the grid, noting that solar PV is "an energy-generator device, not an energy-efficiency device." Tr. Vol. 2, p. 364.6 – 364.7. In addressing the Commission's findings in the Generic Docket that behind-the-meter consumption arising from solar generation is equivalent to EE from a system perspective, Witness Horii advanced a narrow distinction and argued that the order only indicated that "analysis methods used to evaluate EE should also be used to evaluate customer-generation." Tr. Vol. 3, p. 463.2.

**B. Compliance with the EE/DSM Mechanism**

The Applications also outlined the EE/DSM Mechanism that was approved pursuant to the provisions of S.C. Code Ann. § 58-37-20. Applications at 5 – 7. In addition to the requirements of South Carolina law outlined above, the EE/DSM Mechanism requires both a qualitative and quantitative review of potential EE/DSM programs. Order No. 2021-33, Ex. 1 at 35-36.

**1. Qualitative Requirements**

The Companies explained that the qualitative analysis under the EE/DSM Mechanism requires any proposed program to be "(a) commercially available and sufficiently mature, (b) applicable to the [Companies'] service area demographics and climate, and (c) feasible for a utility DSM/EE Program." Applications at 5 – 6. Witness Duff evaluated the Program under these parameters and testified that solar PV satisfies each prong of this qualitative analysis, as evidenced by the amount of rooftop solar generation on the Companies' systems. Tr. Vol. 1, p. 57.6. Witness Duff noted that this offering is also in-line with the Companies' repeated commitment to propose EE/DSM programs that fulfill these parameters in order to maximize customer savings—a

commitment that was recently encouraged by the Commission in Order No. 2021-447. Tr. Vol. 1, p. 57.6 – 57.7. No party disputed that the Program achieves these qualitative requirements.[15]

**2. Quantitative Requirements**

The Applications also outlined the quantitative analysis required by the EE/DSM Mechanism. Specifically, the Program's benefits must outweigh its cost, as evidenced primarily by a score under the UCT of greater than 1.0. Applications at 6. The Companies' Applications provided the UCT results, which were 1.95 and 2.58 for DEP and DEC respectively—each well above the required threshold of 1.0. *Id.* According to Witness Duff, the UCT evaluates the "utility system benefits of implementing an EE/DSM program to the cost incurred by the utility to achieve those benefits." Tr. Vol. 1, p. 57.8. Witness Duff explained that the scores for the Program under the UCT, as presented in the Application, indicate that "the benefits to the utility system exceed the costs." Tr. Vol. 1, p. 57.7. As such, Witness Duff noted that "it would be uneconomic and cost customers more money for the [Companies] not to pursue implementation of the program." *Id*. Witness Duff also provided these costs and benefits in terms of real dollars:

> The Companies estimate that these total avoided costs are approximately $26.5 million for DEC and $3.9 million for DEP. In comparison, the estimated costs of the Program are $10.5 million for DEC and $2.0 million for DEP. Based on this UCT evaluation, it would cost the Companies' customers more if the Program was not implemented.

Tr. Vol. 1, p. 57.8. Witness Duff explained that because these benefits would inure to all customers on the Companies' systems, low-income customers will realize savings as well.[16] Tr. Vol. 1, p. 57.9.

[15] Although the ORS disputed that solar could serve as EE under S.C. Code Ann. § 58-37-20, it also provided testimony analyzing the Program under the EE/DSM Mechanism and did not dispute that the Program achieves these qualitative requirements.

[16] The Companies and Settling Parties have also committed to developing a low-income version of the Program, which would be contingent upon approval of the Program by the Commission and the North Carolina Utilities Commission.

Witness Moore testified in support of the Program and explained that these savings arise due to the customers' self-consumption of behind-the-meter generation. Tr. Vol. 1, p. 161.8 – 161.11. Witness Moore stated that this portion of solar consumption will "reduce the primary energy—such as coal and natural gas—consumed by power plants to meet the needs of all ratepayers." Tr. Vol. 1, p. 161.11 – 161.14. As such, Witness Moore described the Program as "beneficial for ratepayers as a whole, and [] in the public interest." Tr. Vol. 1, p. 164.8.

The ORS was the only party in these proceedings that disputed the Program's success in meeting the quantitative requirements under the EE/DSM Mechanism. Witness Morgan outlined the ORS's general approach to its quantitative analysis and explained that the ORS did not focus on the benefits of the Program because the "benefits speak for [themselves]." Tr. Vol. 2, p. 381.19 – 381.20. Specifically, Witness Horii claimed that the UCT alone is "inadequate to evaluate whether the Solar PV EE program is in the best interests of the Companies customers." Tr. Vol. 3, p. 459.13. As a result, ORS Witness Horii argued that the TRC should be utilized on par, if not with greater weight, than the UCT. Tr. Vol. 3, p. 459.16. In acknowledging that prior Commission orders declare the UCT as the primary test, Witness Horii claimed that this language does not "preclude the evaluation and use of the TRC test." Tr. Vol. 3, p. 459.14. Although Witness Horii recognized that the UCT "is a valid cost test," Witness Horii argued that the TRC provides a broader picture of how the Program would impact the "entirety of the using and consuming public." *Id.* In distinguishing the two tests, Witness Horii claimed that the "fundamental difference between the UCT and TRC test is in the costs that are included in each test." Tr. Vol. 3, p. 459.15. According to Witness Horii, the UCT includes utility incentive costs and applicable administrative costs, while the TRC includes the "actual **installed cost** of the solar PV and the applicable administrative costs." *Id.* (emphasis in original). Witness Horii urged the Commission to require

that the proposed Program have a TRC score higher than 1.0, just as it requires for the primary cost benefit test—the UCT. Tr. Vol. 3, p. 459.16. Witness Horii went on to acknowledge that the Companies actually provided TRC scores, but argued that those results are also flawed because the Companies (i) overestimated transmission and distribution ("T&D") benefits of solar, (ii) failed to include the cost of solar integration, and (iii) failed to use a reasonable estimate of free-riders. Tr. Vol. 3, p. 459.19. According to Witness Horii, free-riders are those participants in the Program that would have installed solar PV without the incentive—meaning that the utility would have received the corresponding benefits of the solar PV generation regardless of program implementation. *Id.* Witness Horii claimed that the Companies' estimate of 10% free-ridership in the Program is inaccurate and that a free-ridership assumption of 79% should be used. Tr. Vol. 3, p. 459.22 – 459.24. Witness Horii stated that this revised assumption would dramatically impact the results of the UCT because a higher free-ridership percentage corresponds to a lower UCT score. Tr. Vol. 3, p. 459.26. Witness Horii explained that he "focused on residential rate schedule RS" in forecasting the number of free riders, even though these customers would not be eligible for the incentive. Tr. Vol. 3, p. 459.24.

In response, Witness Duff noted that Witness Horii's testimony stands in contradiction to the EE/DSM Mechanism—which was supported by the ORS—which requires the UCT to "serve as the determinant screen in assessing cost-effectiveness for program approval." Tr. Vol. 3, p. 576.10. Likewise, Witness Duff stated that utilization of any other test also contradicts the past practice of the ORS, which has "exclusively relied upon the UCT in its review of the Companies' program cost-effectiveness in recent EE/DSM rider filings." Tr. Vol. 3, p. 576.11. Rather, Witness Duff stated that, generally, he was not aware of "any case where the ORS has opposed an energy-efficiency or demand-response program that was deemed to be cost-effective under the primary

screen of the mechanism at the time." Tr. Vol. 3, p. 582.11 – 582.17. Witness Duff explained that, regardless of past practice or the requirements of the EE/DSM Mechanism, advocating for the utilization of the TRC "ignores the UCT's fundamental benefit of evaluating the program costs that would be passed on to ratepayers and compares them to the benefits of avoided costs of implementing the program." Tr. Vol. 3, p. 576.12. Witness Duff went on to explain that the Companies utilized conservative inputs for each of the four cost tests and that if certain other benefits were included—such as the costs and benefits of the Winter BYOT Program—that the Program would pass all four cost tests when viewed from the perspective of both utilities as a whole. Tr. Vol. 3, p. 576.14. Witness Duff also tied the Companies' estimate of T&D costs back to the approved methodology under the cost recovery provisions of the EE/DSM Mechanism. Tr. Vol. 3, p. 576.15. Witness Duff noted that this methodology has "never been questioned by the ORS or any other party in South Carolina." *Id.* Likewise, Witness Duff stated that Witness Horii's suggestion to include integration costs in the UCT misses the mark because these costs are related to exports under NEM programs, not costs associated with self-consumption under EE/DSM programs. Tr. Vol. 3, p. 576.16. However, the Companies noted that the inclusion of any integration costs would need to be carefully studied, but were likely already reflected in the Rate Impact Measure Test ("RIM") and Participant Cost Test ("PCT") results provided by the Companies—screens which the Program passed. *Id.*

As for Witness Horii's free-rider estimate, Witness Duff explained that the estimate is fundamentally flawed because it attempts to compare apples and oranges given that customers under Schedule RS are not even allowed to participate in the Program. Tr. Vol. 3, p. 576.17. Even still, Witness Duff noted that Witness Horii's statement that the Companies' 10% free-rider estimate would only be appropriate "for programs that would have almost no market uptake

without the incentive program" actually supports the Companies' 10% estimate. Tr. Vol. 3, p. 576.18. Witness Duff provided the existing adoption rate of solar PV on the Companies' systems, which is 0.23%. *Id.* Witness Duff described this adoption level as evidencing "almost no market uptake" in accordance with Witness Horii's testimony, which further supports the Companies' use of a 10% free-ridership level. *Id.* Witness Duff explained that Witness Horii's inflated free-ridership assumption ignores the economics of solar PV in the Carolinas. *Id*. Witness Duff further clarified that even if the Companies' free-ridership estimate is too high or too low, the EM&V process will correct for any margin of error through the annual EE/DSM rider true-up process. *Id*. Witness Duff stated that, for example, if the Companies provided an incentive for 10 people to install an LED bulb, the Companies would eventually measure what savings were achieved through those 10 customers by using a statistically significant sample of customers (e.g. eight customers) and would determine whether the utility incentive encouraged their use of the bulb. Tr. Vol. 1, p. 141.7 – 141.19. Witness Duff continued that, if the customer would have installed the LED bulb regardless of the incentive, that customer would be considered a free-rider and the gross savings of the LED program would be reduced by 10%. Tr. Vol. 1, p. 141.20 – 141.25.

In this way, Witness Duff explained that Witness Horii's utilization of free-ridership on the front-end, rather than through the EM&V process, is wholly inappropriate and contrary to the established EE/DSM framework in South Carolina—the framework that the ORS has used since the inception of the Companies' EE/DSM programs. Tr. Vol. 3, p. 576.19 – 576.20. Witness Huber echoed the concerns of Witness Duff and explained that Witness Horii's utilization of the TRC as the primary test is problematic because Witness Horii does not adequately account for the impact of financing in his TRC calculation. Tr. Vol. 4, p. 709.9. Witness Huber explained that many customers in South Carolina choose to finance or lease their systems due to the large upfront costs

associated with purchasing. *Id.* As such, a large portion of the solar PV market is third-party owned or financed. *Id.* Additionally, Witness Huber pointed out that the TRC does not even treat the incentive amount as a cost, but "treats private investment as a cost." Tr. Vol. 4, p. 813.2 – 813.3. In other words, the customer incentives paid for by non-participants are not accounted for in the TRC analysis, while the private investment by participants does factor into the TRC analysis. *Id*. If Witness Horii did account for this reality in South Carolina, Witness Huber stated that the TRC test results would be "materially higher." *Id.* Witness Huber re-iterated that the risk that ratepayers will not get what they are paying for under the Program is "very, very low, especially given how conservative [the Companies] were in the assumptions" underlying the cost tests. Tr. Vol. 4., p. 740.16 – 740.21. Witness Huber explained that, notwithstanding these flaws, "[w]hen you have the other costs tests, you don't really need the TRC because the other tests give you what the TRC summarizes." Tr. Vol. 4, p. 812.24 – 813.2. Witness Huber also rebutted Witness Horii's free-rider forecasts by highlighting the fact that adoption under the Solar Choice Tariffs is likely to be deflated—even if payback periods are similar—given that they involve more complex rate designs which could make customers feel less certain about bill savings. Tr. Vol. 4, p. 709.10. According to Witness Huber, this is one of the primary reasons that a certain, up-front incentive payment is so important for solar adoption in South Carolina. *Id.* Finally, Witness Huber highlighted Witness Horii's misplaced reliance on Schedule RS customers because they are ineligible for the Program. *Id.* For all of these reasons, Witness Huber explained that Witness Horii's free-rider calculations are flawed and that the Program is likely to enhance the adoption of rooftop solar at a much greater rate than estimated by Witness Horii. Tr. Vol. 4, p. 709.10 – 709.11

In support of the Program, Witness Moore provided historical context, and noted that the UCT is increasingly becoming the favored test within EE/DSM programs. Tr. Vol. 1, p. 176.13 –

178.5. According to Witness Moore, this trend recognizes two primary failings of the TRC test in this context: (i) the TRC does not evaluate the cost of utility incentives paid for by non-participating ratepayers and (ii) the TRC is usually applied in an asymmetric manner due to the difficulty in quantifying benefits of these programs, which leads to lower test scores. Tr. Vol. 6, p. 930.5 – 930.23. Witness Moore also noted that the Program's TRC results were lower largely because the TRC includes participants' out-of-pocket costs to install solar, costs that are not included in the UCT. Tr. Vol. 6, p. 970.1 – 970.20. Witness Moore concluded that the Program's strong UCT score, contrary to the ORS's arguments, actually indicates that non-solar customers may see disproportionately higher benefits than participants (though both participants and non-participants would benefit from the Program. Tr. Vol. 6, p. 970.24 – 971.5. Witness Moore also recommended that the Commission accept the Companies' T&D estimates that were disputed by Witness Horii. Tr. Vol. 6, p. 934.11. Witness Moore re-iterated that the Companies utilized the Commission-approved methodology in evaluating the Program and that the ORS's advocacy for a different methodology reminded him of the myopic view that the ORS took in the Solar Choice Dockets, in which it also argued that the Commission should utilize a cost allocation method different from the one approved by the Commission. Tr. Vol. 6, p. 934.12.

On surrebuttal, Witness Horii suggested that because Dominion Energy South Carolina utilizes the TRC, the Companies should do so as well. Tr. Vol. 3, p. 463.9. Although Witness Horii recognized that the EE/DSM Mechanism settlement agreement requires the UCT to operate as the "primary" test, Witness Horii continued to argue that the Commission should look to the TRC instead. Tr. Vol. 3, p. 463.11. However, Witness Horii agreed with Witness Duff that the UCT "will ensure that the energy efficiency benefits achieved by a program for the utility system are greater than the cost to the utility system to offer that program." Tr. Vol. 3, p. 463.9 – 463.10. Yet,

Witness Horii maintained the ORS's focus on only the costs of the Program in advocating for use of the TRC because it focuses upon costs to customers, rather than balancing the costs to the utility in implementing the Program. Tr. Vol. 3, p. 463.12. Witness Horii further acknowledged that although he does not believe the Program is cost-effective on its own, "[i]t is not unusual for jurisdictions to allow non-cost-effective activities to be bundled with highly cost-effective activities in order to provide a program or portfolio that is broad in scope or reach but remains cost-effective in aggregate." Tr. Vol. 3, p. 463.14. However, Witness Horii maintained that even if combining these other activities led to a TRC score of greater than 1.0—meaning that the customer benefits exceed the customer costs under that test—the Program is simply not EE and should not be approved. Tr. Vol. 3, p. 463.15. Finding yet another common-ground with Witness Duff, Witness Horii agreed that the costs in these tests would be lower if they accounted for third-party financing or leasing, yet, Witness Horii did not concede that they should be included simply because he did not have "specific data about South Carolina third-party solar leasing, financing costs and total deal structures." Tr. Vol. 3, p. 463.15 – 463.16. As for Witness Duff's statement that the Companies calculated T&D costs in accordance with accepted South Carolina methodologies, Witness Horii pointed to his own experience and the practices of PG&E as justification for why the Commission should not follow established South Carolina practices. Tr. Vol. 3, p. 463.17. Specifically, Witness Horii argued that past practices are "irrelevant" and that he was "not here as an auditor to determine whether past practices have been adhered to." Tr. Vol. 3, p. 463.19. Witness Horii further testified that he is "not bound by the opinions, or lack thereof, of past South Carolina EE/DSM participants"—including the ORS. *Id.*

As for the disputed free-rider estimates, Witness Horii acknowledged that there would be differences had he instead used customer forecasts for those customers that could actually

participate in the Program, but he maintained that the "fundamental economics and payback periods would be similar." Tr. Vol. 3, p. 463.20. In response to Witness Duff's statement that these free-rider evaluations are usually conducted in the EM&V process, Witness Horii stated that the Program should not even make it to such a process given that it "is not an EE program." Tr. Vol. 3, p. 463.22. Although Witness Horii faulted the Companies' application of forecasted adoption rates under their free-rider calculations, Witness Horii acknowledged on the stand that he also "based [his] free-rider – free-rider analysis on forecasted adoptions" but simply stated that the Companies utilized them in an "incorrect way." Tr. Vol. 3, p. 533.19 – 534.6. Witness Horii further testified that it may be the case that the incentive is even more important given the rate complexities within the Solar Choice Tariffs—as suggested by Witness Huber—but that the Companies provided no evidence that would be the case. Tr. Vol. 3, p. 463.30.

Commission Determination

**A. Compliance with S.C. Code Ann. § 58-37-20**

The Commission finds that the Program is consistent with and should be evaluated as an EE/DSM program under S.C. Code Ann. § 58-37-20.

The Commission's task in deciding whether the Program fits under the EE/DSM statute is fundamentally whether the statute is intended to encompass this type of program. It is clear that the EE/DSM statute *does* and *was intended to* encompass this type of program. The purpose of the EE/DSM statute is to reduce demand on the utility system using a variety of demand-side (i.e., behind-the-meter) measures and programs. That is exactly what this Program does. In fact, the Commission learned through credible expert testimony that the Program was carefully designed to maximize the amount of demand-side reductions using a strategic combination of requirements and features.

The Commission—as the quasi-judicial body responsible for implementing Title 58 of the S.C. Code of Laws—must give effect to the intent of the legislature. To aid in executing this responsibility, the S.C. Supreme Court has provided guidance:

> A statute as a whole must receive practical, reasonable, and fair interpretation consonant with the purpose, design, and policy of lawmakers. In interpreting a statute, the language of the statute must be read in a sense that harmonizes with its subject matter and accords with its general purpose.

*Town of Mt. Pleasant v. Roberts*, 393 S.C. 332, 713 S.E.2d 278 (S.C. 2011).

> The cardinal rule of statutory construction is to ascertain and effectuate the intent of the legislature. All rules of statutory construction are subservient to the one that the legislative intent must prevail if it reasonably can be discovered in the language used, and the language must be construed in the light of the intended purpose of the statute. Statutes, as a whole, must receive practical, reasonable, and fair interpretation, consonant with the purpose, design, and policy of lawmakers.

*Corbin v. Carlin*, 620 S.E.2d 745, 366 S.C. 187 (S.C. 2005).

This precedent leads to the question: What is the purpose, design, and policy of the EE/DSM statute? Principally, the EE/DSM statute is intended to reduce customer reliance on utility-generated power, and to incentivize utilities to pursue programs that achieve that purpose. In other words, the EE/DSM statute motivates utilities to take actions to reduce customer demand that, absent the statute, would be counter to the utilities' interest.

The EE/DSM statute was created by the Energy Conservation and Efficiency Act of 1992, the preamble of which indicates an intent to reduce utility consumption of out-of-state coal, oil, and natural gas as a portion of South Carolina customer energy expenditures. Energy Conservation and Efficiency Act of 1992, Bill 1273 (1992), *available at* https://www.scstatehouse.gov/sess109_1991-1992/bills/1273.htm ("Whereas, energy expenditures represent a substantial monetary outflow from South Carolina's economy in that South Carolina produces no coal, oil, or natural gas; and Whereas, increasingly high usage of

imported oil results in economic vulnerability . . . ."). The EE/DSM statute itself—in fulfilling that intent—requires the provision of cost recovery and incentives for measures that are "cost-effective, environmentally acceptable, and reduce energy consumption or demand." In short, cost-effectively reducing demand on the utility system is the primary intent of the EE/DSM Statute.

There is no debate that S.C. Code Ann. § 58-37-20 establishes the requirements for utility EE/DSM programs regulated by the Commission. As recently articulated by ORS Witness Horii, "[s]olar systems or any demand side management ('DSM') options reduce customer bills through reductions in the amount of electricity the customer needs to purchase from a utility." Hearing Exhibit No. 9. That is precisely what the Program proposed in this case accomplishes; the rooftop solar incentive component of the Program will result in measurable, additional behind-the-meter reductions in customer demand.

The additional rooftop solar capacity resulting from this Program will produce demand reductions on the grid through additional behind-the-meter self-consumption. It is undisputed that self-consumption of behind-the-meter generation reduces demand on the Companies' systems, and that these demand reductions impact the utility system in an equivalent way to the installation of other EE/DSM measures. It is also true, and was acknowledged by the ORS,[17] that rooftop solar is an "energy supply" technology, a type of measure for which the EE/DSM statute explicitly **requires** cost recovery. S.C. Code Ann. § 58-37-20 (The EE/DSM Mechanism "must: provide incentives and cost recovery for energy suppliers and distributors who invest in **energy supply** and end-use technologies . . . .") (emphasis added). Moreover, the Program achieves reduction in the demand for electricity from the grid by encouraging a customer's investment in solar PV, a

[17] Tr. Vol. 2, p. 247.3.

"renewable energy technolog[y]," which is explicitly included in the definition of allowable demand-side activities. S.C. Code Ann. § 58-37-10(1); S.C. Code Ann. § 58-37-20.

The purpose and intent of the EE/DSM statute is to reduce demand with behind-the-meter solutions. That is exactly what the Program accomplishes. The Program consists of a package of requirements and features that work together to cost-effectively reduce customer demand while not negatively impacting the household's function; these requirements and features include the following:

- Customers must own an individually metered residence and install a solar PV system;
- Customers must participate in the Companies' Winter Bring Your Own Thermostat demand response program;
- Participants must be all-electric customers; and
- Participating customers are subject to EE/DSM evaluation, measurement, and verification, pursuant to the EE/DSM Mechanisms, to validate savings (which will inform the Companies' cost recovery).

These features are vital elements of the proposed Program, and they work together to reduce customer demand, which results in avoided electricity production, capacity, and transmission and distribution costs. This strategic, synergistic bundling is expressly permitted by the EE/DSM Mechanism. Order No. 2021-32, Order Exhibit No. 1 at 32, Docket No. 2013-98-E (Jan. 15, 2021); Order No. 2021-33, Order Exhibit No. 1 at 35, Docket No. 2015-163-E (Jan. 15, 2021).

The focus of demand-side programs on reducing demand at the meter is further supported by the UCT, which evaluates EE/DSM programs based on a comparison between (1) the utility's avoided electricity production, capacity, and T&D costs, and (2) the costs of the program. This analysis is exclusively focused on reductions in grid energy usage, and this is precisely what the Program proposed in these proceedings would achieve. Other programs that similarly achieve savings at the meter by leveraging behind-the-meter generation were described in testimony: the

PowerShare program, approved by the Commission in 2009, and the CHP program, approved by the Commission in 2018. PowerShare is designed such that customers self-consume energy from on-site backup generation while being subject to load curtailment requirements. That arrangement is closely analogous to the Program proposed in these proceedings. *See* Order No. 2009-336, Docket No. 2009-166-E (May 19, 2009) (approving, among others, DEC's PowerShare program); Order No. 2009-374, Docket No. 2009-190-E (June 26, 2009) (approving, among others, DEP's CIG Demand Response program under the Demand Response Automation tariff). Likewise, the CHP program reclaims heat from the customer-owned Topping Cycle CHP unit, which is often a combustion turbine. Duff Rebuttal Test. at p. 7, ll. 17-18. These programs—some of which have been in place for over a decade—are analogous to the Program proposed in these proceedings because they similarly produce demand reductions that reduce customer demand on the grid.

In light of the intent of S.C. Code Ann. § 58-37-20 and the design of the Program proposed in this case, we find that the Program fits squarely under the EE/DSM statute and is consistent with previous analogous EE/DSM offerings. The Commission concludes that ORS's assertion that solar cannot be energy efficiency is immaterial. No decision of the Commission turns on whether the Program will be referred to as "solar as energy efficiency" or "solar as demand-side activity." As explained by the Companies' witnesses, the Companies generally refer to programs that reduce the need to supply kilowatt hours to customers as energy efficiency and programs that shift demand away from peak periods as demand side management. Tr. Vol. 1, p. 83.24-84.2. But because the Program comports with the plain language and intent of S.C. Code Ann. § 58-37-20, the Commission will not accept the ORS's invitation to reject the Program based on third-party definitions of what may or may not constitute energy efficiency or other related semantic arguments.

**B. Compliance with EE/DSM Mechanism**

As described in greater detail below, the Commission finds that the Program complies with the applicable qualitative and quantitative requirements of the EE/DSM Mechanism.

**1. Qualitative Requirements**

No party disputed that the Program satisfied the applicable qualitative requirements of the EE/DSM Mechanism, which requires the Program to be "(a) commercially available and sufficiently mature, (b) applicable to the [Companies'] service area demographics and climate, and (c) feasible for a utility DSM/EE Program." Order No. 2021-32, Ex. 1; Order No. 2021-33, Ex. 1. The Commission is well aware of the availability of rooftop solar in the Companies' service territories and understands that thousands of the Companies' customers have installed the same. This supports adoption of the Program under the first two prongs of the qualitative assessment, and the Companies have demonstrated satisfaction of the third prong given that the Program also meets the quantitative requirements of the EE/DSM Mechanism, as outlined below.

**2. Quantitative Requirements**

Unlike the qualitative requirements, the quantitative requirements were contested by the ORS. However, as described below, the Companies' data-driven analyses reveal that the Program well exceeds the applicable cost-effectiveness thresholds under the EE/DSM Mechanism. At the outset, the Commission re-iterates its finding in prior proceedings that the UCT is the primary cost-effectiveness screen for the Companies' EE/DSM programs in South Carolina. This is made clear by the plain language of the EE/DSM Mechanism, which prohibits implementation of any program failing to score higher than a 1.0 on the UCT. There is no such restriction related to the three ancillary tests. Contrary to testimony advanced by the ORS, this necessarily means that the Commission affords greater weight to the UCT than the RIM, PCT, or TRC. The Commission is

not persuaded by the ORS's argument that the TRC should be utilized on par with the UCT, particularly given that the UCT's designation as the primary test in South Carolina was derived pursuant to a settlement to which the ORS was a party. Although the Commission remains able to review and consider the results of these three ancillary tests, those results will not necessarily be determinative, but can serve as a point of comparison to determine impacts on various interests highlighted by each such test. This can be particularly important when a proposed program barely exceeds the 1.0 threshold of the UCT given that the Commission can determine whether that incremental benefit to the system is outweighed by other factors. However, in cases where the UCT score far exceeds 1.0 (as here), the Commission need not rely upon these ancillary tests to conclude that a program's benefits overall will exceed its costs.

Although the Commission finds no need to rely upon the scores from these three ancillary tests to determine the cost-effectiveness of the Program in these proceedings, there was much testimony devoted to the usefulness and specific inputs of the TRC test. To the extent parties provide results of the TRC test to the Commission in the future, the Commission encourages those parties to account for the reality of the solar market in South Carolina, which is inundated with third-party financing and lease arrangements. As such, any TRC results submitted to the Commission should account for these impacts, which the record indicates would likely increase the applicable TRC score.

Turning to the determinative UCT and the other scores presented in these proceedings, the Commission finds the Companies' analyses to be data-driven, consistent, and reliable. As such, the Commission accepts the scores of 1.95 and 2.58 for DEP and DEC, respectively. These scores represent real dollars flowing to customers in the form of system savings, amounting to a net benefit of approximately $18,000,000. The Commission is unpersuaded by the ORS's arguments

to utilize different inputs related to (1) T&D costs, (2) integration costs, and (3) free-riders. As for the Companies' calculation of T&D costs, the Commission finds their approach acceptable and in-line with prior approaches before the Commission. Further, Witness Horii's focus upon integration costs is misplaced because integration costs are more appropriately reviewed in an NEM proceeding—and *were* reviewed in an NEM proceeding—rather than as related to a comprehensive EE/DSM program. The Commission rejects the ORS's attempt to disregard the accepted and approved practices applicable to EE/DSM program review and finds that the circumstances of this case do not warrant a departure from previously applicable practices.

Finally, Witness Horii's free-rider evaluation curiously and improperly focuses upon customers who are not even allowed to participate in the Program and ignores the relatively low existing solar adoption on the Companies' systems. A fundamental element of EE/DSM programs in South Carolina is to incentivize the adoption of measures that will lead to avoided cost benefits on the utility system. Certainly, an upfront incentive will accomplish that goal and drive adoption, particularly given the oncoming and ambitious implementation of more complex rate structures within the Solar Choice Tariffs. Although the Commission finds it unlikely that the Companies' forecast of free-riders deviates to the extent claimed by Witness Horii, the Commission notes that any such deviations will be addressed in the EM&V process—a concept which the ORS seems to dismiss outright on this issue. In reality, the EM&V process means that the Commission will have another opportunity to review the Companies' proposed cost recovery—as well as data regarding actual free-riders—in another proceeding before the Commission prior to the Companies recovering any of these costs. As such, the Commission will not reject the Program on this ground given that any deviation from the Companies' forecasts will be accounted for in EM&V.

In sum, the Program well exceeds the UCT when utilizing appropriate methodologies and the Commission finds that the Program achieves the applicable quantitative requirements of the EE/DSM Mechanism.

**EVIDENCE AND CONCLUSIONS SUPPORTING FINDINGS OF FACT AND CONCLUSIONS OF LAW B(1)-B(2)**

Summary of the Evidence

As described above, the Applications petitioned the Commission for approval of the Program under S.C. Code Ann. § 58-37-20 and the corresponding EE/DSM Mechanism. Applications at 8. Accordingly, the Companies submitted direct testimony of Witnesses Duff and Powers that exclusively addressed the Program under these provisions. Tr. Vol. 1, p. 57.1; Tr. Vol. 1, p. 49.1. As described in detail below, Witness Duff and Witness Powers provided data-driven testimony evidencing the Program's compliance with applicable EE/DSM provisions under South Carolina law. *Id.* If approved, those provisions permit the Companies to recover "net lost revenue" arising from the Program. Order No. 2021-32, Ex. 1; Order No. 2021-33, Ex. 1.

However, in ORS Witness Morgan's direct testimony, the ORS—without having previously raised the issue—argued that S.C. Code Ann. § 58-40-20(I) also applies to the Program. Tr. Vol. 2, p. 227.9. As explained above, S.C. Code Ann. § 58-40-20(I) contains the following language:

> Nothing in this section, however, prohibits an electrical utility from continuing to recover distributed energy resource program costs in the manner and amount approved by Commission Order No. 2015-194 for customer-generators applying before June 1, 2021. Such recovery shall remain in place until full cost recovery is realized. **Electrical utilities are prohibited from recovering lost revenues associated with customer-generators who apply for customer-generator programs on or after June 1, 2021**.

*Id.* (emphasis added). Relying upon this language, ORS Witness Morgan alleged that this provision—which was codified within the Solar Choice section of Act 62—means that the

Companies are prohibited from recovering any NLR associated with the Program. [18] Tr. Vol. 2, p. 227.8 – 227.9. ORS Witness Morgan seemed to simply take issue with the amount of costs that the Companies would be permitted to recover under the applicable EE/DSM statute—and later admitted that he did not weigh those costs against potential benefits of the Program. Tr. Vol. 2, p. 250.24 – 251.3.[19]

Witnesses Ford and Huber provided rebuttal testimony related to this issue in light of their extensive experience with the Solar Choice program. Witness Ford described these programs as separate from the Companies' proposal in these proceedings, and noted that not all Solar Choice customers can participate in the Program. Tr. Vol. 4, p. 687.8. Additionally, Witness Ford explained that EE/DSM programs are not "customer-generator program[s]" because the definition of "customer-generator" clearly only relates to NEM programs given its focus on exports. Tr. Vol. 5, p. 877.23 – 878.5. Witness Ford explained that Witness Morgan "neglects to acknowledge that S.C. Code Ann. § 58-40-20(I) specifically and exclusively addresses **DER** Program costs" which are related to NEM programs under Act 236. Tr. Vol. 4, p. 683.13 – 683.16. (emphasis in original). Witness Ford explained that the Companies are not proposing to recover DER program costs or lost revenues associated with Solar Choice and referenced in S.C. Code Ann. § 58-40-20(I). Tr. Vol. 4, p. 683.14 – 683.19. Rather, the Companies are instead requesting recovery of different costs in the form of NLR, just as they would for any EE/DSM program in South Carolina. Tr. Vol. 4, p. 683.19 – 683.23.

[18] As described above, this topic was also the subject of the ORS's Motion for Summary Judgment and the Companies' Motion to Affirm, which were both denied.

[19] ORS Witness Morgan explained that "[w]e are all aware that there are benefits to solar PV" and that he "did not present benefits to the Commission." Tr. Vol. 2, p. 251.2 – 251.3; Tr. Vol. 2, p. 251.23.

Finally, Witness Huber emphasized that the Program was designed to comply with the applicable EE/DSM tenets of South Carolina law in all aspects—which includes the ability of the Companies to recover NLR. Tr. Vol. 5, p. 849.13 – 850.3. As such, Witness Huber explained that if the Commission were to go outside of the applicable EE/DSM tenets in South Carolina and apply prohibitions on cost recovery applicable only to the Program, the Companies would have to withdraw the Program because implementation would no longer be feasible. Tr. Vol. 5, p. 849.25 – 850.3.

Intervenor Witness Moore echoed the testimony of Witness Ford and Huber, and explained that—contrary to NEM programs—EE/DSM programs permit the Companies to recover the difference between the (i) energy savings caused by every measure implemented through an EE program and (ii) energy savings actually caused by the program, as determined "after-the-fact" through the EM&V process. Tr. Vol. 6, p. 927.8 – 927.23. Witness Moore described this as the "Net-to-Gross" ("NTG") ratio. Tr. Vol. 6, p. 934.4. Witness Moore testified that this NTG framework underscores the fundamental distinction between the Solar Choice and EE/DSM programs. Tr. Vol. 6, p. 934.5 – 934.6. That is, the EE approach counts "only the portion of customer solar production that is self-consumed behind the meter on a monthly basis" which is unrelated to exports and "completely distinct from the net lost revenues recovered through the EE/DSM rider." Tr. Vol. 6, p. 934.6; Tr. Vol. 6, p. 934.5. As such, Witness Moore explained that "based on the existing EE framework, the [P]rogram will not cause net lost revenue recovery for [S]olar [C]hoice as it existed before this program and continues outside of the [P]rogram." Tr. Vol. 6, p. 929.5 – 929.8. Rather, Witness Moore explained, the Program will, by statutory requirement, "allow short-term recovery of net lost revenues associated only with the increment of expansion in the solar market that is proven to be specific to Smart $aver Solar." Tr. Vol. 6, p. 929.9 – 929.13.

The ORS responded through the surrebuttal testimony of Witnesses Lawyer, Horii, and Morgan. In addressing the various distinctions in the lost revenue recovered under NEM programs and those recovered under EE/DSM programs, Witness Lawyer argued that "[l]ost revenues are lost revenues" no matter what form they may take. Tr. Vol. 2, p. 235.3. Witness Morgan expressly acknowledged the differences in cost recovery pointed out by Witness Ford, but stated that the "differences in the calculations and cost recovery mechanisms for lost revenue and net lost revenue" do not concern the ORS. Tr. Vol. 2, p. 235.2. In attempting to link the two types of cost recovery, Witness Morgan argued that because the "source of the kWh sales reduction originates from customer-generators who apply for the proposed Program on or after June 1, 2021" then Act 62 prohibits the Companies from recovering lost revenues of any kind associated with customer-generators that also elect to participate in the Program. *Id.*

Commission Determination[20]

A review of the record reveals that although the parties dispute whether the Program qualifies as an EE/DSM program, the parties do not dispute that S.C. Code Ann. § 58-37-20 applies to the Commission's evaluation and adoption of EE/DSM programs.[21] Instead, the dispute centers upon whether S.C. Code Ann. § 58-40-20(I) also applies to the Program, with the net effect of prohibiting the Companies from recovering "lost revenues" associated with the same. As described above, the Commission finds that S.C. Code Ann. § 58-40-20(I) does not apply to the Program, or any other EE/DSM program that may be approved by the Commission. The Commission finds that Act 62, by its plain and unambiguous terms, does not modify the existing recovery mechanisms under EE/DSM programs. The General Assembly did not amend or modify S.C. Code Ann. § 58-

[20] This topic is addressed in greater detail in Section V(A) of this Order.

[21] The Commission notes that the parties also submitted separate legal briefs on this issue which inform the Commission's decision.

37-20 with Act 62, but instead permitted the continued recovery of "net income" or NLR under that statute for EE/DSM programs, including those which may include energy supply resources as contemplated in that statute. The simple fact that a portion of Solar Choice customers will be eligible to and will participate in the Program does not somehow transform the nature of this program or the plain language of South Carolina law to prohibit the Companies from recovering NLR under EE/DSM programs going forward. Therefore, the Commission finds that S.C. Code Ann. § 58-40-20(I) is inapplicable to EE/DSM programs and applying that cost recovery provision to EE/DSM programs would be inconsistent with and violative of the laws applicable to the same. As such, the Companies can continue to recover NLR as set forth in the EE/DSM Mechanism.

**EVIDENCE AND CONCLUSIONS SUPPORTING FINDINGS OF FACT AND CONCLUSIONS OF LAW C(1)-C(3)**

Summary of the Evidence

The Companies' Applications noted that if the Program is approved, it would be subject to the EM&V process, similar to other EE/DSM programs in South Carolina. Applications at 3. Specifically, the Companies explained that although the Program is expected to produce savings well in excess of the costs to implement the Program, the "projected savings will be confirmed in [EM&V] by a third party . . . once adequate participation allows for a statistically valid sample." *Id.* at 3. The Companies described the process as utilizing "industry-accepted methods to collect and analyze data; measure and analyze Program participation; and evaluate, measure, verify, and validate the energy and peak demand savings." *Id.* Witness Powers noted that the EM&V process would also "conduct a broad survey of both participating and non-participating residential customers to assess their acceptance of the Program." Tr. Vol. 1, p. 49.8. Witness Powers further explained that tentative participation targets "indicate that an EM&V process could be possible approximately one year after Program implementation." *Id.* Witness Duff elaborated that "if the

Commission finds that the costs are outweighing the benefits or that there is some other inherent problem with the program," the Commission could tell the Companies to cancel the Program and "lost revenues and incentive would be trued up for what that actual amount was that was problematic." Tr. Vol. 1, p. 92.20 – 93.1.

Witness Moore described the EM&V process as a beneficial feature that is specific to EE/DSM programs. Tr. Vol. 1, p. 164.5. Witness Moore explained that "unlike central-station power plants, demand-side programs are continuously evaluated after implementation for cost-effectiveness and performance, and can be flexibly adjusted, improved, or eliminated as conditions change." *Id.* Witness Moore further explained that "[u]nder the EE/DSM framework, utilities . . . bear the burden of proving that their programs cause an additional increment of energy savings that would not have occurred in the market, and they only get credit for that additional increment." Tr. Vol. 6, p. 928.14 – 928.25.

However, the ORS advanced a different approach and argued that even with the EM&V process, the Companies will be "gambling" with the money of their customers given that there is no guarantee that any of the projected savings will be realized. Tr. Vol. 2, p. 340.4 – 340.5. In support of its claim that customers may not realize the savings estimated by the Companies, the ORS pointed to certain disagreements between the ORS and the Companies regarding the cost-effectiveness tests—such as the free-rider estimates. Tr. Vol. 3, p. 458.10 – 458.24.

In response, Witness Duff explained that these arguments by the ORS miss the point of the EM&V process entirely. Tr. Vol. 3, p. 576.19 – 579.20. Specifically, the EM&V process will actually "update the realized free-ridership as part of the overall net-to-gross ratio used to determine net savings impacts for cost recovery purposes." *Id.* (footnote omitted). Contrary to a

"gamble," Witness Duff indicated that the results of the EM&V process "will be applied back to the start of the Program." Tr. Vol. 3, p. 579.20. Witness Duff elaborated as follows:

> In other words, just as is the case with all EE/DSM programs, should EM&V determine a different free-ridership rate than the Companies have assumed, the annual EE/DSM Rider true up process will ensure that customers are only paying for the measured net energy savings associated with the Program.

*Id.*. (emphasis in original). Witness Duff explained that, "as part of the annual rider filing, [the Companies] will actually go in and show what the actual costs were, the energy savings, to the extent we've already done EM&V." Tr. Vol. 1, p. 91.22 – 91.25. Witness Duff further explains that, even if the EM&V is not complete before the rider filing, the Companies will provide an update as to "how the program is doing with respect to customer sign-up, the energy savings associated with it, as well as any other things that would change the variables of the avoided costs." Tr. Vol. 1, p. 92.16 – 92.19. Witness Duff continued that "if the Commission finds that the costs are outweighing the benefits or that there is some other inherent problem with the program," the Commission could tell the Companies to cancel the Program and "lost revenues and incentive would be trued up for what that actual amount was that was problematic." Tr. Vol. 1, p. 92.20 – 93.1. Witness Duff cited an additional safeguard of the EM&V process and explained that all "EM&Vs are reviewed by an ORS expert to make sure that they find no issues with how things were measured and verified. And those results are ultimately used to determine whether the program should go forward, as well as what is ultimately recovered from customers." Tr. Vol. 1, p. 151.13 – 151.18.

Witness Moore echoed the testimony of Witness Duff and explained that the EM&V process ensures that recovery of NLR is denied unless the process shows "that the customer was not a free-rider." Tr. Vol. 6, p. 934.7. Witness Moore noted that in this way, the Program will be offered under similar restrictions as a pilot program—which will further mitigate the risks to the

Companies' customers. Tr. Vol. 6, p. 966.1 – 966.4. Specifically, Witness Moore rebutted the ORS's characterization of the Program as a "gamble" by noting that the EM&V process, participated projection numbers, and high cost-effectiveness scores actually provide a risk-mitigation environment similar to pilot programs approved by the Commission. Tr. Vol. 6, p. 964.13 – 966.4. As such, Witness Moore explained that the Program should be approved in full. *Id*.

In response to Witness Duff's explanation of the EM&V process and the corresponding true-up of free-rider estimates, Witness Horii simply stated that "I recommend the proposed Program be rejected as proposed." Tr. Vol. 3, p. 463.22. However, Witness Lawyer acknowledged that the EM&V could be fairly described as an "after-the-effect true-up." Tr. Vol. 2, p. 335.20 – 335.25.

Commission Determination

The Commission finds that the Program will be subject to the EM&V just as any of the Companies' other EE/DSM programs in South Carolina. Therefore, not only will the Companies have opportunities to earn incentives through the PPI and PRI, but a third-party evaluator will review actual data regarding Program implementation to ensure that customers only pay for the actual net energy savings realized from the Program. Likewise, the evaluator will be able to determine other Program metrics—such as free-ridership—which the Companies can utilize to modify the Program in a way that best benefits all customers. This process is particularly relevant to these proceedings given the discussion at the hearing of implementing the proposed Program as a "pilot." The Commission finds that the projected participation numbers indicate that full implementation of the Program will resemble pilot-like restrictions and mitigate corresponding risk to customers. As such, the Commission is confident that full implementation of the Program,

which will be subject to EM&V and cost recovery process, will result in a measured approach to this innovative EE/DSM program—resulting in something far different than a "gamble" for the Companies' customers.

**EVIDENCE AND CONCLUSIONS SUPPORTING FINDINGS OF FACT AND CONCLUSIONS OF LAW D(1)-D(4)**

Summary of the Evidence

The Companies' Applications described certain eligibility criteria for customers seeking to enroll in the Program—one of which being that the customer must also enroll in the Companies' Winter BYOT Program and Solar Choice Program. Applications at 3 – 4.[22] The Companies explained that offering this bundle of measures to customers provides "programmatic synergies and enables the Program to provide both energy and capacity savings." Applications at 4. Witness Duff explained that offering Solar Choice and the Winter BYOT programs in conjunction with the Program would lead to additional benefits, but that those benefits were not included in the Companies' cost-effectiveness analysis and the Program passes the relevant thresholds on its own. Tr. Vol. 3, p. 576.13 – 576.24. Witness Powers noted that customers must agree to remain in the Winter BYOT Program for 25 years, however, a customer may choose to unenroll at any time by repaying $200 for each year of the 25-year contract for which the customer is not enrolled. Tr. Vol. 1, p. 47.8 – 47.19. Witness Duff clarified that this $200 fee is not simply a punitive measure—instead it represents a prorated portion of the incentive for the years of the 25-year term that the customer elected not to participate. Tr. Vol. 1, p. 47.8 – 47.19. In this way, the Companies further protect non-participating customers by ensuring the incentive reflects actual value to the

[22] The Winter BYOT Program was approved by the Commission for DEP in Order No. 2020-830 issued in Docket No. 2015-163-E, and for DEC in Order No. 2020-831 issued in Docket No. 2013-298-E.

Companies' systems and by recouping losses associated with participants' early termination. Tr. Vol. 3, p. 611.21 – 612.23.

Witness Huber explained that the Program and Winter BYOT Program complement each other because solar "provides a good base layer of energy and . . . probably a small amount of that winter peak" and "a substantial amount of the summer peak," while "the thermostat targets the winter peak, and . . . [is] really focused on winter peaks when solar isn't necessarily there." Tr. Vol. 4, p. 713.12 – 713.20. Witness Huber asserted that this creates a "holistic resource that's covering all the different seasons and that's providing not only energy but [] capacity." Tr. Vol. 4, p. 713.20 – 713.23. Witness Huber explained that when offered as a suite of programs, these benefits translate into reduced costs for ratepayers by targeting summer and winter peaks that "really drive investment costs that all customers end up paying," thereby saving "all customers money from avoiding future capital expenditure." Tr. Vol. 4, p. 714.3 – 715.2.

As for the 25-year term, Witness Huber noted that the Program "will continue to evolve and incorporate new technologies, new, different types of thermostats, but having that key dispatchability and control over the HVAC is absolutely . . . key." Tr. Vol. 4, p. 786.9 – 786.12. Witness Huber further explained that the contractual arrangement between the Companies and these customers ensures that customers remain able to take advantage of new and innovative technologies as they become available over such term. Tr. Vol. 4, p. 720.10 – 720.24.

Witness Moore re-iterated the benefits of offering this bundle of measures to customers and noted that the time-of-use ("TOU") rates in the Solar Choice Tariffs provide customers in the Program with a "coordinated environment which encourages the most critical sub-set of solar customers to modify their energy consumption to the benefit of all ratepayers." Tr. Vol. 1, p. 164.7. Witness Moore characterized this relationship as one of "carrots and sticks." Tr. Vol. 1, p. 162.16

– 162.19. Witness Moore noted that one such "carrot" is the saved expense for customers opting to consume power during low-cost times under the TOU rates, while one such "stick" is the $200 fee for failing to respond to a winter peak under the Winter BYOT Program. Tr. Vol. 2, p. 163.2 – 163.10.

Witness Horii acknowledged that there would be additional benefits arising from this suite of offerings (such as from the Winter BYOT Program), but that the Companies' exclusion of those benefits from their cost screens was reasonable. Tr. Vol. 3, 459.30.

Witness Duff confirmed that the Companies chose not to include the costs and benefits of the Winter BYOT Program in their cost screens. Tr. Vol. 3, p. 576.13 – 576.14. However, to provide a "holistic South Carolina view," Witness Duff provided updated cost-benefits screens that included the costs and benefits arising from the combination of the Program with Winter BYOT. Tr. Vol. 3, p. 576.14. Witness Duff explained that, by including for the savings associated with Winter BYOT, the UCT cost-effectiveness score becomes 2.75 for DEC and DEP combined and the TRC cost-effectiveness score becomes 1.0. *Id.* Witness Huber explained that these benefits arise, in part because the rate designs under the Solar Choice Tariffs and the Program and Winter BYOT are complementary and "incentivize[] . . . customers to reduce their consumption and modify their usage patterns resulting in cost-effective system load reductions to the benefit of all customers." Tr. Vol. 4, p. 706.13 – 706.22.

Witness Horii acknowledged that "participation on TOU rates and Winter BYOT . . . could offer some benefits" but argued that the Companies "have neither quantified how much those increased benefits might be, nor demonstrated that the proposed Program is a cost-effective way to obtain those increased benefits." Tr. Vol. 3, p. 463.25. Witness Horii further explained that although the Companies did not include the Winter BYOT Program costs and benefits in their

initial cost-effectiveness screens, it would not be unusual to bundle such programs to achieve an EE/DSM portfolio that is "cost-effective in aggregate." Tr. Vol. 3, p. 463.14. Witness Horii noted that the Program "would likely drive higher participation on the Winter BYOT program" but suggested that the increased participation could be achieved by offering another, separate incentive under the Winter BYOT Program or by continuing to inform customers about the Winter BYOT Program. *Id.*

Commission Determination

The Commission finds that bundling the measures and features within the Program proposed in these proceedings will drive increased benefits for the Companies' customers. As explained above, the record reveals that the Companies designed this entire package of programs to work together, across platforms, to drive synergies and increase value to customers. Although the ORS takes issue with the fact that Solar Choice customers can participate in the Program and suggests that participation in the Winter BYOT Program could be facilitated by other means, these positions miss the intent and effect of this offering. The reality is that the Companies, over the course of many months and with significant stakeholder feedback, developed this bundle of measures as an innovative solution to issues that typically plague these types of stakeholder interactions. The Companies noted that the additional benefits arising from these synergies were not included in the original cost-effectiveness scores, and these benefits will only increase over time, and become clearer as EM&V is conducted to validate savings.

As for the term and corresponding termination fee, the Commission finds these warranted given the nature of the voluntary Program. For example, although customers must agree to participate in the Winter BYOT Program for 25 years, many of these same customers will also sign up for solar leases with terms approaching that length of time. Importantly, the 25-year term

only relates to the Companies' control over the customer's heating load, and the Commission directs the Companies to provide customers with flexibility throughout that term to utilize emerging technologies that may not be widely available today. As for the termination fee, the Commission finds that it appropriately reflects the value realized to the Companies' system. No one has argued that a customer should be permitted to terminate their position after the first year and keep the remaining incentive, and doing so would be contrary to the design and intent of the Program. In short, utilizing these cross-platform interactions will drive increased value to the Companies' customers and this type of innovative approach should be encouraged.

## VIII. ORDERING PARAGRAPHS

NOW, THEREFORE, IT IS HEREBY ORDERED THAT:

1. The pre-filed testimony of ORS witnesses O'Neil Morgan, Brian Horii, and Robert Lawyer, the pre-filed testimony of the Companies' witnesses Timothy Duff, Lynda Powers, and Leigh Ford, and the pre-filed testimony of the Clean Energy Intervenors' witness Eddy Moore, along with their respective exhibits entered into evidence as Hearing Exhibits 1 through 3, 8, and 13 through 14, are accepted into the record in the above-captioned case without objection. The pre-filed testimony of the Companies' witness Lon Huber is accepted into the record subject to the portions that were stricken on Page 7, Line 21 through Page 8, Line 9. Lastly, the oral testimony of the above witnesses presented at the hearing on October 28, 2021, November 2, 2021, November 3, 2021, November 4, 2021, November 5, 2021, and November 9, 2021, is also incorporated into the record of this case.

2. The EE/DSM Mechanism and S.C. Code Ann. § 58-37-20 contain the exclusive requirements for EE and DSM programs in South Carolina.

3. S.C. Code Ann. § 58-40-20(I) relates exclusively to NEM programs and the prohibition on recovering the NEM Incentive as set forth in Commission Order No. 2015-194 associated with customer-generators under the Solar Choice programs.

4. The Companies are permitted to recover NLR associated with programs that achieve the requirements of the EE/DSM Mechanism and S.C. Code Ann. § 58-37-20.

5. Solar PV may serve as an EE/DSM measure under South Carolina law and the EE/DSM Mechanism.

6. The Companies proffered ample evidence in these proceedings demonstrating that the Program satisfies the EE/DSM Mechanism and S.C. Code Ann. § 58-37-20. As such, the Companies have demonstrated, by a preponderance of the evidence, that the Program should be approved as being consistent with the EE/DSM Mechanism and S.C. Code Ann. § 58-37-20.

7. The Commission approves the Program, as set forth in the Applications.

8. DEC shall file the Smart $aver Solar Energy Efficiency Program (SC) Tariff and DEP shall file the Residential Service – Smart $aver Solar Energy Efficiency Program – SSSEE-1 Tariff with the Commission and provide a copy to the ORS within ten (10) days of receipt of this Order. The Companies shall file all other applicable retail tariffs with the Commission and provide a copy to the ORS within ten (10) days of receipt of this Order. The tariffs should be electronically filed in a text-searchable PDF format using the Commission's DMS System (https://dms.psc.sc.gov/). An additional copy of any revised tariff should be submitted via the E-Tariff system and a copy of any new tariffs should be sent via e-mail to etariff@psc.sc.gov to be included in the Commission's E-Tariff system (https://etariff.psc.sc.gov). Each tariff sheet shall contain a reference to this Order and its effective date at the bottom of each page.

9. Based upon the testimony and exhibits received into evidence at the hearing and the entire record of this proceeding, the Commission hereby adopts each and every finding of fact enumerated herein. The Commission's conclusions of law are fully stated above.

10. Any motions not expressly ruled upon herein are denied.

11. This Order shall remain in full force and effect until further Order of the Commission.

BY ORDER OF THE COMMISSION:

_____

Justin T. Williams, Chairman

ATTEST:

_____

Jocelyn Boyd, Chief Clerk/Administrator

**BEFORE THE**
**PUBLIC SERVICE COMMISSION OF**
**SOUTH CAROLINA**

**DOCKET NOS. 2021-143-E & 2021-144-E**

| | |
|---|---|
| In the Matters of: | |
| Application of Duke Energy Progress, LLC for Approval of Smart $aver Solar as Energy Efficiency Program | **CERTIFICATE OF SERVICE** |
| Application of Duke Energy Carolinas, LLC for Approval of Smart $aver Solar as Energy Efficiency Program | |

The undersigned, Lyndsay McNeely, Paralegal for Duke Energy Carolinas, LLC and Duke Energy Progress, LLC, does hereby certify that she has served the persons listed below with a copy of the Joint Proposed Order of Duke Energy Carolinas, LLC, Duke Energy Progress, LLC, Southern Alliance for Clean Energy, the South Carolina Coastal Conservation League, Upstate Forever, North Carolina Sustainable Energy Association, Vote Solar, and Solar Energy Industries Association via electronic mail at the addresses listed below on December 3, 2021.

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Dated this 3rd day of December, 2021.

Lyndsay McNeely